

The Breaking Wave

A conversation about reforming
the oceans management system
in Aotearoa New Zealand

WORKING PAPER

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APPENDIX 1

AOTEAROA NEW ZEALAND'S MARINE ENVIRONMENT

Chapter 2 of the working paper defines Aotearoa New Zealand's marine environment, and outlines some problems and challenges being faced in it. In this appendix we provide a more detailed description of what that marine environment looks like, to give a sense of its diversity. This is through a series of spotlights.¹

A spotlight on estuaries

An estuary is defined geographically, with reference to its position relative to freshwater catchments and the sea. It is a partially enclosed body of water, that is either permanently or periodically open to the sea, and that is affected by both runoff from the land and inflow from the sea.² Estuaries are located in the brackish water at river mouths and are one of the most ecologically productive marine habitats, obtaining nutrients from the catchments that empty into them. New Zealand has around 400 estuarine systems interspersed along the coastline.

There can be many different habitat types within an estuary, such as sand and mudflats, as well as vegetated habitats like mangrove and seagrass. They provide spawning and nursery areas for a wide range of fish and shellfish species. In addition, estuaries are a critical habitat and food source for migratory wading birds, some which travel to New Zealand from as far afield as Alaska each year. Estuaries have continued to fill in with sediment washed off the land; this is a natural process but has been accelerated by human impacts. Nutrients also come from the land, and in a healthy and balanced ecosystem, these enrich the seawater to support marine life.³ The Parliamentary Commissioner for the Environment in a recent report has looked at the crucial importance of estuaries and their management.⁴

Harbours and bays, on the other hand, are physical features defined by the land that surround them. In many places, harbours are sheltered by barrier islands or sandspits. They can protect the land from storms. Estuarine environments can be found in harbours and bays, but not all harbours and bays are estuaries.

A spotlight on fiords

A fiord is also defined by the landform that surrounds it. It is a steep-sided valley that has been carved out by glaciers and then flooded by the sea, and found in the aptly named Fiordland. Here, freshwater input comes from the surrounding landscapes, via waterfalls

and run-off from the mountains and native forests. The copious rainwater leaches through the rich humus of surrounding forest and results in a yellow-coloured layer of freshwater overlaying the denser seawater. This reduces the light levels within the fiords and has resulted in normally deep-water species living closer to the surface.

Fiordland has 14 fiords of varying depths reaching down to over 400 metres. The unique climate, vegetation and topography in this area has resulted in some specialised underwater habitats. Species living within the fiords are tolerant to the freshwater layer and reduced light levels.⁵ Spectacular large tree-like black corals and sea pens, normally only present in deep water, can be found growing there.

A spotlight on reefs

There are two types of reef: those comprised of rock, and those made up of the hard remains of marine organisms. They are usually found in nearshore environments, and are defined by the substrate on which marine life is found.

Rocky reefs are common in nearshore areas around Aotearoa New Zealand's coast. They comprise the harder substrate that remains after softer rocks have been eroded away. Intertidal reefs are rocky areas of the coastline which extend between spring low water and the spring high tide mark. They include a variety of habitats, differentiated by exposure and aspect, and host a wide range of organisms including algae, crustaceans, molluscs and polychaete worms.

The Hauraki Gulf, the northeast coast of Northland, the east coast of the North Island (near Gisborne), the southwest tip of the South Island and the west coast of the Chatham Islands are all important areas for intertidal rocky reefs. Shallow subtidal rocky reefs, to a maximum depth of 50 metres, are found around many parts of the Aotearoa New Zealand coastline. Fiordland, East Cape and the Chatham Islands stand out as being particularly important areas for subtidal rocky reef habitat.

Many reefs are covered in rich algal forests, which can contain several large kelp species and smaller brown, red and green seaweeds. These provide important habitats for a wide range of sea creatures, including over 2,000 species of invertebrates, which are permanently attached to the rocks. Many of these species are only found in New Zealand.

The presence of lush seaweed beds on rocky reefs is generally associated with high biodiversity, because

the beds provide food and refuge for other small organisms. These creatures, which include crustaceans, molluscs (shellfish) and polychaetes (small worms), primarily live amongst kelp. They provide an important trophic link between the seaweed, as a primary producer, and predatory fishes. Rocky reefs support some 250 species of reef fish.

A *biogenic* reef is composed of the hard parts of living and dead organisms which create structure above the seafloor. These reefs often occur in areas of strong water movement where there is a good food source and little sediment deposition.⁶ Biogenic reefs are formed by colonial tube worms, bivalves such as oysters and mussels, sponges, corals, bryozoans, and coralline algae and can form extensive areas of three-dimensional structures up to two metres tall. Formations such as horse-mussel beds and mangrove habitats are also classed as biogenic reefs. These living reefs are critically important as they provide a stable home for other marine life in an otherwise featureless seabed.

The distribution of known biogenic reefs around the country is patchy, but they are primarily found in the far south of New Zealand on the Catlins Coast and around Stewart Island; in the middle of Aotearoa New Zealand from Kaikōura across to the northwest tip of the South Island, in Cook Strait, and along the Kāpiti and Wairarapa coasts; and in the north around East Cape and the east coast of Northland. Stewart and Chatham islands support the greatest proportions of biogenic reef habitat in the country.⁷ Being located on the seafloor, they are very susceptible to seabed disturbing activities such as trawling and dredging. Yet because of the ecosystems and production they support, they are also very attractive places to fish.

One of the most biodiverse biogenic reef habitats in New Zealand is rare, and occurs where gravel lying on the seabed is intermixed with the hard calcium remains of shellfish and bryozoans. These areas are called "calcareous gravels" and are home to rich thickets of bryozoans and sponges. A very ecologically important area of these gravels occurs around the northern tip of the North Island near Spirits Bay, where more than 330 species of bryozoans and 220 species of sponges have been found. They also occur near the southern coast of the South Island, off the Otago coast, in the Foveaux Strait and in Tasman Bay.

A spotlight on soft sediment habitats

A soft sediment habitat is defined by the substrate in which marine life lives. Supporting a wide variety of organisms, soft sediment habitats cover 70 per cent of the world's seafloor, and are found throughout the country's harbours, estuaries and open coastal

environments.⁸ They play a key role in marine ecosystem functioning.

Bottom-dwelling animals burrow within the sediment column (up to two metres below the sediment surface in the case of some crabs and shrimps). Because sediment is an accumulation of particles that have settled to the seabed, it is generally rich in organic matter. Soft sediments are inherently complex: bacteria, microalgae and invertebrates all influence oxygen and nutrient concentrations simultaneously, via direct and indirect pathways.⁹

Oxygen, as part of water molecules, can travel into the seabed through small gaps in the permeable sediment-seawater interface. The deeper into the sediment habitat an organism goes, the lower the concentration of oxygen becomes. Thus animals living beneath the surface must maintain open pore holes. Additionally, this pore water often contains a higher concentration of nutrients than overlying seawater. These nutrients fertilise algal growth – which also relies on sunlight.¹⁰

A spotlight on seamounts

Seamounts are, for want of a better term, mountains that are entirely under the sea. As enormous underwater structures (often defined as over 1,000 metres high), seamounts in the deep waters of Aotearoa New Zealand's EEZ are of considerable scientific interest, often hosting unusual or unique groups of organisms and a biodiversity disproportionate to their size and area.¹¹ These environments are not only widely recognised as areas of high productivity, but are also regarded as a fragile habitat because of their poor ability to recover if damaged – not dissimilar to fragile alpine environments on land.

Seamounts can support a very diverse range of life. They provide a hard stable surface for sessile plankton feeders to attach to, and act as oases within large plains of seabed covered in low-lying soft mud. Seamounts offer a refuge for deep-water fish species including orange roughy, black oreo and black cardinalfish. Animals attached to the seamounts receive their primary energy supply from nutrient-rich water currents, which well up around the flanks of the large structures as they intercept the ocean currents. In addition, tiny invertebrate prey (zooplankton) which are transported along in the currents, become trapped on the seamounts. The seamount communities are also fed by detritus and faecal pellets drifting down from organisms which live closer to the surface. The high productivity of these areas attracts large congregations of fish, which, in turn, attract other species to the surrounding waters, such as sperm whales and sea birds (and, might we add, more recently human beings).¹²

Seamount ecosystems are complex and varied. Many harbour their own unique endemic species. Since

the mid-1990s, scientists have studied a variety of seamount habitats in Aotearoa New Zealand, including those of the Chatham Rise and the southern Kermadec volcanic arc. They found species/taxonomic diversity to be high. A 2004 study of Northland Plateau seamounts recorded 396 species of macro-invertebrates on two seamounts. At least 17 per cent of the species (Bryozoa alone) recovered by the survey are currently undescribed for the New Zealand region, including six genera entirely new to science.¹³

Seamounts can support very large deep-water sponges and corals that may live for hundreds of years. In these habitats, sponges can reach several metres in height and corals have been found growing up to 10 metres tall. Deep-water coral banks, large sea fans, sea pens and sponges are particularly vulnerable as they are fragile and slow growing. Once destroyed, coral formations appear to need 200 to 400 years to fully recover (if at all).¹⁴

A spotlight on hydrothermal vents

Hydrothermal vents are commonly found near volcanically active places, such as areas where tectonic plates are moving apart. As hydrothermal fluids pour out of the vent and react with cold, oxygenated seawater, a number of rapid chemical reactions take place. These ultimately form metal-rich chimneys which provide an important environmental niche for deep-sea marine life.

Hydrothermal vents support complex ecosystems of unusual organisms that have developed unique biochemical adaptations to high temperatures and the highly toxic (to land-based creatures) environment. The fluids emanating from the vents contain chemicals that feed microbes at the base of a unique food web that survives without any interaction with the sun.¹⁵ These microbes use chemicals such as hydrogen sulphide to provide the energy source that drives their metabolic processes. They ultimately support a wide range of other organisms such as tubeworms, shrimp and mussels.¹⁶

Scientists have recently discovered new forms of life deep under the sea within these vents. Despite the often very high temperatures, large numbers of micro-organisms grow around the vents, typically as bacterial mats. Many animals are unique to particular vent sites and are not seen even a few hundred metres away.¹⁷ Deepwater hydrothermal vents in the Kermadec Islands support extensive beds of giant vent mussels, which are unique to the area, and which in turn provide habitat for deep-water crabs and an endemic eel-like fish.

A spotlight on algae and seagrass

Algae are an ancient group of primitive plants that support major marine food webs. In contrast, seagrasses are flowering plants (angiosperms), whose ancestors once lived on land. There is only one species of seagrass in Aotearoa New Zealand, *Zostera*, which forms meadows in shallow waters right around the country.

Seagrass and kelp store nutrients in their biomass for a long time, including nitrogen and phosphorous compounds transported by rivers from catchments to the sea. This means that they function as a kind of biological purification system in coastal ecosystems.¹⁸ A healthy seagrass habitat has also been linked to the abundance of juvenile fish.¹⁹

A spotlight on marine invertebrates

Marine invertebrates are commonly lumped together, but they are a highly diverse group of species, including sponges, worms, shellfish and echinoderms. The sessile animals living on rocky reefs harvest plankton and organic particles from passing seawater. They include sponges, hydroids, corals, anemones, bryozoans, tube worms and barnacles.

Hydroids, jellyfish, corals and sea anemones belong to the group Cnidaria and are among the simplest of marine invertebrates. Jellyfish may consist of individual organisms or colonies of individuals, some of them specialised for tasks such as feeding, stinging and reproduction.²⁰ The name "coral" is given to a variety of animals which grow in colonies with skeletons made of calcium carbonate or horny material. The largest invertebrate sea-floor species on the planet, the bubblegum coral, lives in New Zealand waters. True (or "stony") corals may be solitary (cup corals, to which most New Zealand species belong) or colonial (reef-building corals). Their skeletons are made up of calcium carbonate and are external to the body. Black corals, of which there are 58 species in New Zealand waters, belong to a different group than the true corals. They have hard, protein-based skeletons with tiny polyps. Mostly they live in deep water, but in Fiordland, the black coral *Antipathella fiordensis* can live in relatively shallow depths.²¹

Bryozoans have been variously referred to as lace corals, moss animals or sea mats. These animals form coral-like groupings on rocky and gravel areas, which in turn provide shelter for other invertebrates and juvenile fish. Nearly 1,000 different species of bryozoans are found within New Zealand's marine area and most of these are unique to the country.

In contrast to the sessile animals, other invertebrates move around the rocky reef to feed. These include herbivores, such as kina and top shells, which graze on seaweed, and carnivores, such as octopus,

starfish, crayfish and crabs. The reef is also home to brightly coloured sea-slugs (nudibranchs), shellfish-type animals which have evolved to live without shells. Some sea-slugs protect themselves with stinging cells recycled from their cnidarian prey.

There are numerous types of shellfish found in New Zealand's marine environment. Of these, many bivalves, such as mussels, cockles, oysters, pipi and scallops, feed by straining plankton from the water. Some species of bivalves can reach densities of over 20,000 per square metre. Most bivalves are sedentary or slow-moving animals. Some, such as pipi and cockles, spend their life buried in seafloor sediment, while others like oysters and mussels remain anchored to one spot by attaching themselves to rocks and solid structures.²² Scallops, on the other hand, can move quickly through the water if they sense danger. Shellfish beds, particularly dense ones, can trap significant amounts of sediment and filter large amounts of water.

A spotlight on fish

Fish are found in all kinds of marine habitats. There are too many species to cover here. Common inshore fish include snapper and trevally, while deepwater fish include orange roughy, hoki and oreo. A snapshot of some – the ones we tend to eat – can often be found on the wall of one's local fish and chip shop.

The life cycles of fish are as diverse as their appearance. For example, snapper live for up to 60 years, blue cod for around 30 and gurnard for about 15; in contrast, flounder survive for only 3–4 years.²³ Fish range in size from tiny pilchards to large sharks.

Some unusual species make the country's rocky reefs their home including sea horses and sea dragons. The sea horse species found in Aotearoa New Zealand is one of the largest in the world. The sea horses anchor themselves to seaweeds or other structures on the reef with their prehensile tails, and ambush their food, mainly crustaceans.

Many of the fish found in the country's waters are present in other parts of the world. However, there are a number of fish species that are very rare, and found only living in certain habitats, such as the morse-code leatherjacket which is generally only spotted in the Kermadec Islands.²⁴ There is a much higher level of endemism in New Zealand rock pool fish which are less mobile. It is thought that 62 per cent of Aotearoa New Zealand's 94 species of rock pool fish are only found in this country.²⁵ Fish are an important food source for marine mammals and birds, as well as for the larger predatory migratory fish species.

A spotlight on seabirds

Aotearoa New Zealand has been referred to as the "seabird capital of the world". This is because more species of seabirds breed here than in any other country (a quarter of all species). There are thought to be more species of seabirds in the country than land birds. Thirty-five species of seabird only breed in New Zealand.

New Zealand's seabirds range from the large southern royal albatross, which can have a wingspan of over three metres and which spends most of its time at sea, to the small and critically endangered New Zealand fairy tern, which nests on Northland beaches.

Seven species of penguin can be found in New Zealand, with four of these breeding on the mainland (yellow-eyed, white flippered, Fiordland-crested and blue). The blue penguin is the smallest penguin species in the world and can be found along the coasts of the North and South Islands. The largest penguin in New Zealand is the distinctive yellow-eyed penguin, which nests along the south-east coast of the South Island, and on subantarctic islands further south.

A spotlight on marine mammals

As well as being the seabird capital of the world, Aotearoa New Zealand is a marine mammal "hotspot". It is estimated that just under half of the world's total number of dolphin and whale species are found here. A number of different species of dolphin live year-round in New Zealand's coastal waters, including the common dolphin, dusky dolphin, bottlenose dolphin and orca.

Species of whale, including the humpback and blue whale, migrate through New Zealand waters. Other species such as the Bryde's whale and southern right whale breed here. A small population of around 40 to 50 Bryde's whales resides in the Hauraki Gulf year round, with a further 150 visiting seasonally. The species is classified as nationally critical in New Zealand, although there are secure populations overseas.

New Zealand fur seals and sealions are part of the other main group of marine mammals found in New Zealand's waters, the pinnipeds. It is estimated that up to two million fur seals lived around the New Zealand coastline before humans arrived. Their population was decimated by hunting but is now recovering. The endemic and threatened New Zealand sea lion mainly breeds in the Auckland Islands and can be seen around southern coasts, including the Catlins and Otago Peninsula. Southern elephant seals and leopard seals are occasional visitors to New Zealand beaches, travelling up from subantarctic and Antarctic waters.

ENDNOTES

- 1 The following spotlights are drawn from Lucy Brake and Raewyn Peart *Sustainable Seas: Managing the marine environment* (Environmental Defence Society, Auckland, 2015).
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- 3 Ministry for the Environment and Statistics New Zealand *Our marine environment 2019* (ME 1468, October 2019) at 21.
- 4 Parliamentary Commissioner for the Environment *Managing our estuaries* (August 2020).
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- 6 Department of Conservation and Ministry of Fisheries *Coastal marine habitats and marine protected areas in the New Zealand Territorial Sea: a broad scale gap analysis* (31 August 2011) at 11.
- 7 Ministry of Agriculture and Forestry *Mapping the values of New Zealand's Coastal Waters, 4: A Meta-analysis of environmental values* (Biosecurity New Zealand Technical Paper No 2010/08, Wellington, 2009) at 46.
- 8 Drew Lohrer and Nicole Hancock "Marine soft sediments: more diversity than meets the eye" (2004) 12(3) *Water and Atmosphere* at 26.
- 9 At 26.
- 10 At 26.
- 11 A A Rowden, M R Clark and S O'Shea *Benthic biodiversity of seamounts on the Northland Plateau* (Ministry of Fisheries, Marine Biodiversity Report No 5, 2004).
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- 13 A A Rowden, M R Clark and S O'Shea *Benthic biodiversity of seamounts on the Northland Plateau* (Ministry of Fisheries, Marine Biodiversity Report No 5, 2004) at 9.
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- 19 MA Morrison and others *Linking marine fisheries species to biogenic habitats in New Zealand: a review and synthesis of knowledge* (Ministry for Primary Industries, New Zealand Aquatic Environment and Biodiversity Report 130, 2014); Darren Parsons and others *The influence of habitat structure on juvenile fish in a New Zealand estuary* (2013) 34(4) *Marine Ecology*, both as cited in Ministry for the Environment and Statistics New Zealand *Our marine environment 2019* (ME 1468, October 2019).
- 20 Dennis Gordon "Corals, anemones and jellyfish - Hydroids and siphonophores" Te Ara - the Encyclopedia of New Zealand (26 September 2016) <<http://www.TeAra.govt.nz/en/corals-anemones-and-jellyfish/page-3>>.
- 21 Dennis Gordon "Corals, anemones and jellyfish - True corals and sea anemones" Te Ara - the Encyclopedia of New Zealand (26 September 2016) <<http://www.TeAra.govt.nz/en/corals-anemones-and-jellyfish/page-2>>.
- 22 Maggy Wassilieff "Shellfish - Bivalve molluscs" Te Ara - the Encyclopedia of New Zealand (12 June 2006) <<http://www.TeAra.govt.nz/en/shellfish/page-4>>.
- 23 Raewyn Peart *Voices from the Sea: Managing New Zealand's Fisheries* (Environmental Defence Society, Auckland, 2018).
- 24 Carl Walrond "Coastal fish - Widespread fish of the rocky sea floor" Te Ara - the Encyclopedia of New Zealand (12 June 2006) <<http://www.TeAra.govt.nz/en/coastal-fish/page-6>>.
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APPENDIX 2

A DESCRIPTION OF THE CURRENT OCEANS MANAGEMENT SYSTEM

The Resource Management Act

Arguably at the core of the current system is the RMA. It establishes the framework for the management of “natural and physical resources” in Aotearoa New Zealand to the outer limits of the territorial sea. It therefore has a big marine component. In our resource management project, we described it as:¹

a product of its time (the late 1980s and early 1990s), and reflects a desire for integrated management, effects-based rather than prescriptive decision-making, open and transparent government, Māori values, devolution, public input, and a degree of faith in the market as to how resources are used.

The Act has a broad purpose of “sustainable management”.² Despite a chequered history and ongoing debate about what this purpose does and means (culminating in the *EDS v New Zealand King Salmon* decision and subsequent case law),³ its intention has always been to ensure that firm environmental limits are imposed across all domains, including the marine environment. Many of these are expressed within the principles of the Act in section 6 (matters of national importance, which decision makers must recognise and provide for) and section 7 (other matters, to which they must have particular regard). Matters of national importance include the preservation of the natural character of the coastal environment (which includes the marine environment), protection of areas of significant indigenous vegetation and habitat (including in the marine environment), the relationship of Māori with marine sites and taonga, and public access to the sea. The latter two things are also addressed in the MACA Act (see further below). Section 8 of the RMA provides that decision-makers must take into account the principles of te Tiriti o Waitangi.

The RMA applies to a wide variety of “domains”, including land, freshwater, the coastal and marine environment, soil, air, and impacts on the “environment” more broadly (which is defined to include the condition of communities as well as more tangible resources). The Act as a whole is therefore “integrated” in a spatial sense – the important links between land-based activities and impacts on the oceans are recognised, at least in theory. We don’t have one statute for marine management and another for land management. This is reflected in jurisdictional responsibilities; regional councils have responsibility for regulating impacts on catchments (including through controls on land use) as well as activities in the marine environment.

While the purpose of the Act is extremely broad on its face (and has been interpreted in an even broader way), the things that the RMA actually does in practice

are largely limited by Part 3 of the Act. This, essentially, outlines what people are not allowed to do.⁴ People are free to use private land how they wish,⁵ unless its use is expressly restricted (although in practice, most land uses are restricted in some way).⁶ Control of land use has significant implications for the marine environment (eg nutrients from agricultural activities, sediment and other contaminants from urban development). Discharges to freshwater, which can end up in the coastal environment, are also regulated. But the Act also directly restricts activities occurring in the marine area (express authorisation is required to do these things). These are found in sections 12 to 15B of the Act, and require authorisation to:

- reclaim or drain any foreshore or seabed
- erect, reconstruct, place, alter, extend, remove, or demolish any structure or any part of a structure that is fixed in, on, under, or over any foreshore or seabed
- disturb any foreshore or seabed (including by excavating, drilling, or tunnelling) in a manner that has or is likely to have an adverse effect on it (other than for the purpose of lawfully harvesting any plant or animal – a significant exception)⁷
- deposit in, on, or under any foreshore or seabed any substance in a manner that has or is likely to have an adverse effect on it
- destroy, damage, or disturb any foreshore or seabed (other than for the purpose of lawfully harvesting any plant or animal) in a manner that has or is likely to have an adverse effect on plants or animals or their habitat
- introduce or plant any exotic or introduced plant in, on, or under the foreshore or seabed
- destroy, damage, or disturb any foreshore or seabed (other than for the purpose of lawfully harvesting any plant or animal) in a manner that has or is likely to have an adverse effect on historic heritage
- occupy any part of the common marine and coastal area
- remove any sand, shingle, shell, or other natural material from the common marine and coastal area
- dump any waste or other matter from any ship, aircraft, or offshore installation⁸
- incinerate any waste or other matter in any marine incineration facility⁹
- discharge a harmful substance or contaminant, from a ship or offshore installation into water, onto or into land,¹⁰ or into air¹¹
- discharge water into water from any ship or offshore installation.¹²

The RMA also goes further by preventing *any* other activities in the coastal marine area if they would contravene a planning instrument.¹³ Such instruments do not, however, have limitless jurisdiction. Notably, there is no jurisdiction to set harvest limits for the taking of fish, which is instead done under the Fisheries Act.¹⁴ But regional councils under the RMA are responsible for planning and managing marine aquaculture.¹⁵

The RMA operates, in practice, through the development of a hierarchy of subordinate instruments. Central government can, if it wishes, promulgate national direction in the form of NPSs and NESs. The latter operate as regulations. Significantly, the NZCPS is the only mandatory form of national direction, and includes a range of policies outlining (among many other things) the need for a precautionary approach, integrated management, the avoidance of effects on things like threatened species and protected areas, and recognition of the benefits of some activities.¹⁶

A number of other NESs and NPSs have been created, most within the last decade. Many of these have implications for the marine environment, notably the NES on Plantation Forestry (which imposes consistent standards for afforestation, reforestation and harvesting), the NPS for Freshwater Management (which sets limits for water quality and requires timeframes for implementation), and the NPS on Urban Development (which drives the release of development capacity to facilitate urban growth). There is also now an NES for marine aquaculture, which is primarily concerned with reconsenting existing marine farms.¹⁷

NPSs must be given effect to in a cascade of lower level instruments: regional policy statements, regional plans and district plans. That is a strong direction, and can mean that instruments like the NZCPS in effect contain “bottom lines” that cannot be infringed, although much depends on the actual wording of the instrument (a strong obligation to “give effect” to a weakly phrased policy is not a true bottom line).¹⁸ Regional policy statements are developed by regional councils, and outline objectives and policies (but not regulatory rules) that apply the principles of the Act and national direction to the particular region. Regional plans are also developed by regional councils according to their functions (which include control of activities in and impacting on the coastal marine area), and must give effect to the regional policy statement.¹⁹ Both these instruments cover catchments and the territorial sea, so provide an opportunity for a “mountains to sea” approach.

District plans are developed by territorial authorities, and are primarily concerned with land use (in the traditional sense of town and country planning), although regional councils can also control land use to achieve their “environmental” functions.²⁰ The control of land use by territorial authorities can have important implications for the marine environment – including how urban growth, density and subdivision are provided for and the clearance of vegetation near the coast. District plans must also give effect to the regional policy statement. Combined plans can also be created, which are effectively a combination of a

regional policy statement, regional plans and district plans. It is becoming more common for a regional council to have a single plan with closely linked chapters, rather than multiple regional plans (eg for the coastal environment, freshwater and land). The “coastal” components of regional plans often cover coastal land as well as the marine area, although most rules apply only to the latter (with the former being created through district plans).

RMA plans contain objectives and policies that expand on the purpose and principles of the Act, and through rules and standards determine what people are and are not allowed to do in relation to the marine environment, land, water, air, soil, and so forth (with more specificity than in Part 3 of the Act). In creating and changing plans there is opportunity for public participation and, usually, submitters have appeal rights to the Environment Court on the merits of the plan. More bespoke, and quite different, planning processes have also been introduced for the creation of the Auckland Unitary Plan (following council amalgamations), including components relating to Auckland’s coastal marine area (which includes a substantial portion of the Hauraki Gulf).²¹ National Planning Standards – designed to provide consistency between different council plans – are now another measure that central government can use.²²

Rules in plans, and NESs at a national level, can either prohibit or allow an activity. They can also require a person to obtain different categories of resource consent before undertaking an activity.²³ Different rules can apply in different areas, and often the coastal marine area has some “zones”. However, compared to the relatively advanced and detailed system of zones and overlays on land, spatial delineation at sea is undeveloped and often takes the form of relatively few zones targeted as much at enabling and protecting specific activities (eg ports, marinas, aquaculture) as at the protection of the marine environment (in the sense of marine protected areas). Often the framework is quite general, with many activities provided with a discretionary consenting pathway.

However, it is worth noting that regional plans are certainly capable of imposing strong spatial protections for a variety of reasons, and therefore “marine protected areas” – including through prohibited activity status. They are also more capable than other marine protected area frameworks (see further below) of addressing the root causes of marine degradation coming from land, including through planning controls on activities that disturb soils (thereby releasing sediment) and increase the speed of run-off (such as the removal of wetlands and paving over soils). It is a point that is important when considering how the toolkit could be better used (see Chapter 5), in that the RMA is an opportunity that often seems to be overlooked when it comes to discussions about marine protected areas.

Resource consents under the RMA, once an application is triggered by a rule in a plan, are usually decided by councils or commissioners. Most applications are not publicly notified,²⁴ and the RMA provides for restrictions on what can be considered for some kinds of things.²⁵ If

an application is notified (or “limited” notified), submitters generally have appeal rights to the Environment Court, and there is the ability for some consents to be “called in” and referred directly to the Court (or to a specially appointed Board of Inquiry) for decision.²⁶ There are no appeal rights in relation to notification decisions, although judicial review is possible.

It is also worth noting that, while a resource consent under the RMA is primarily a formal recognition that an activity meets the purpose of the Act (essentially, that it does not have unacceptable impacts on the environment), in some cases it effectively doubles as an exclusive allocation of rights to one person over another in the nature of a licence (eg to occupy coastal space). While the Act does allow for more structured approaches to allocating resources (including coastal space, where councils can tender the right to apply for a coastal permit to occupy),²⁷ for the most part the first person to apply for permission gets the right to use what may be a scarce resource.²⁸

The RMA also provides for other project or site-specific mechanisms: designations (where an approved requiring authority is able to make decisions on land use instead of the relevant council),²⁹ heritage orders (a similar concept where decision-making power rests with an approved heritage protection authority, not the council),³⁰ and water conservation orders (a more protective tool that can be imposed, upon application, to safeguard the values of a specific freshwater body).³¹ These have incidental relevance to the marine environment. It also contains enforcement provisions, including abatement notices, enforcement orders and prosecutions.³²

There is an ability under the RMA for councils to transfer powers to iwi authorities, or for joint management agreements to provide for the shared exercise of powers with Māori.³³ However, uptake has been patchy. Some Treaty settlement legislation requires joint management agreements to be entered into.³⁴

The RMA has been subject to many amendments over its lifetime, and has become significantly larger and more complex than it used to be. Another amendment – to reverse some recent changes (in order to strengthen public participation and remove the collaborative planning track) as well as provide for another planning process (for freshwater) and strengthen the enforcement role of the EPA – has been recently made.³⁵ Overall, the RMA provides a framework within which a substantial amount of discretion is exercised in relation to the protection and use of natural and physical resources, including in the marine environment and with respect to activities on land that can impact the sea.

However, while it is significant, the RMA does not do everything. Perhaps most importantly, the RMA does not manage fisheries resources. That said, as explained later, there is a complex, overlapping and somewhat uncertain interface between the RMA and the Fisheries Act. Both can manage the impacts of fishing on the environment, although there are limits to the extent to which the RMA can do so. The RMA also does not manage the

rate at which minerals are depleted, or allocate rights to explore for or mine minerals. As such, the Act interfaces with the Crown Minerals Act, which does those things. Furthermore, the RMA does not apply to activities undertaken beyond the coastal marine area. The EEZ Act performs a similar role here. The RMA also does not manage some aspects of shipping (including some of their impacts on, or risks to, the environment), which are roles performed under the Maritime Transport Act.

Finally, the RMA does not contain all the tools needed to achieve environmental outcomes in the marine environment, even if its purpose encompasses them (it is primarily an effects-based framework reliant on regulatory tools like plans and consents). Additional layers of tools therefore exist to complement the RMA, delivered through separate frameworks (eg the emissions trading scheme under the Climate Change Response Act, various marine protected area tools under multiple “conservation” statutes, and product stewardship schemes under the Waste Minimisation Act). The separate Biosecurity Act can also be thought of in this way – biosecurity arguably falls within the scope of sustainable management, but the RMA does not provide the targeted tools and institutional architecture necessary to achieve it (eg pathway management plans).

As already noted, the RMA is also set for a significant overhaul (although the exact nature of that remains unclear). This has significant implications for marine management as well as the broader resource management system. Key aspects of this are explored at the end of this chapter.

The Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act

The RMA is complemented by a similar, but much simpler, framework for managing natural³⁶ resources in the EEZ and extended continental shelf.³⁷ Decision-making here is much more centralised, with roles performed by central government and the EPA through regulations, national policy, and the issuing of permits.³⁸ The Act has a generally comparable purpose to the RMA based on sustainability, but a number of novel features (including a much more directive purpose relating to marine pollution, and a firm statutory precautionary principle).³⁹ This framework (particularly interpretation of its precautionary principle) has proved controversial, especially in the wake of high-profile applications for seabed mining being declined.⁴⁰ This is still playing out, with a decision concerning iron sands mining awaited from the Supreme Court at the time of writing.⁴¹ It has also proved controversial because of its approach to te Tiriti o Waitangi, in that its Treaty clause essentially “deems” the Act to comply rather than requiring decisions to have regard to or give effect to the principles of te Tiriti.

Essentially, the EEZ Act was designed as a gap filling piece of legislation. Some activities were already regulated in the EEZ under other regimes, including shipping, the

allocation of mineral rights (including oil and gas), fishing and oil spill incidents, and for the most part these remain separate (although there has been some transfer of environmental jurisdiction from the Maritime Transport Act for marine pollution). There was also already a skeleton framework for other activities under the Continental Shelf Act, but this was regarded quite rightly as being grossly inadequate other than for the allocation of minerals, and its role has been largely usurped by the more developed EEZ Act and Crown Minerals Act.

Prior to the EEZ Act, many activities, including oil and gas operations (with the associated risk of large volume oil spills), had no proper environmental scrutiny.⁴²

Fisheries legislation

The RMA encompasses the management of most natural and physical resources within New Zealand's coastal marine area. But fisheries are managed separately to the RMA, partly for historical reasons and partly in recognition that allocative issues, and proactive stock management of fish as a renewable resource, require more targeted attention than under a laissez-faire environmental effects regime.⁴³

The management of fishing⁴⁴ at sea⁴⁵ occurs under targeted legislation specifically carved out from the RMA and EEZ Act, despite falling squarely within the purpose of those statutes. That is unique among marine sectors.⁴⁶ The core statute is the Fisheries Act, which is supported by and intersects with more specific statutes.⁴⁷ A plethora of regulations have been made under the Act, as this is one of the key mechanisms by which the Act is implemented.

The Act applies to, and manages, fisheries resources both in the territorial sea and the EEZ. That is a key difference when compared with the spatially constrained RMA (and conservation legislation like the Marine Reserves Act), which apply only in the coastal marine area. Its purpose (section 8) is "to provide for the utilisation of fisheries resources while ensuring sustainability", where sustainability means "maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment."⁴⁸ This approach to sustainability – one in which utilisation is specifically sought – is quite different to the broader, more passive and arguably more protective formulation in the RMA and EEZ Act.⁴⁹

Fisheries management in Aotearoa New Zealand is complex, has a rich history,⁵⁰ and has developed a framework quite different to the planning and consenting architecture of the RMA and the reliance (largely) on consenting under EEZ Act. This is because it is focused first and foremost on the proactive management of a particular resource for social and economic benefit, not on the reactive management (prevention and mitigation) of environmental effects. In other words, fisheries legislation seeks to maximise the benefits of using a shared resource, while the RMA seeks to address the impacts of activities

that people may wish to do (and it does not really care if people do an activity or not).

In short, the framework is based on the delineation of specific fish "stocks". A stock may include a single species such as snapper, or occasionally several species (as with the flatfish stock, which includes eight different species). A stock comprises the population of such a species or species group within a defined spatial area called a quota management area, which are broadly based on 10 fisheries management areas (see Figure A.1 below),⁵¹ A single species – like snapper, gurnard or tarakihi – may therefore be managed as a number of distinct stocks. There are generally between one and 10 quota management areas per species (for example, there are six spatially separate snapper stocks – SNA1 through to SNA6). Overall, New Zealand has 98 species (or species groups) that are managed, which are divided into 642 spatially separate fish stocks.⁵² Fish "stocks" can consist of "fish" (which includes finfish and shellfish like mussels and oysters), "aquatic life" (a very broad category of marine and freshwater animal and plant life which for example includes harvestable crustaceans such as crayfish and scampi) and seaweed.

This complexity is exacerbated because there are three quite different "purposes" for which fish are caught. Harvesting of fish from each stock is managed as commercial, customary or recreational fishing, and each has a different management regime applied to it.

Commercial rights to fish stocks are managed through the QMS, which operates through the creation of ITQ. ITQ systems define rights to catch a specified number of fish in a specified location during a specified time period. In Aotearoa New Zealand, ITQ are expressed as "quota shares"⁵³ and provide a right in perpetuity to harvest a proportional share of the TACC for a fish stock. Each quota share generates an ACE which is the right to harvest that share of the TACC during one fishing year.⁵⁴ Both ITQ and ACE are tradeable. ACE is often leased to fishers who do not own quota, to enable them to harvest particular species. As well as ACE, commercial fishers require a fishing permit before they are able to commercially harvest fish and they can only sell their catch to a licensed fish receiver. Those receivers must report monthly on the types and amounts of fish received and who supplied them, and this information is used to inform subsequent management decisions.⁵⁵ Fishers can also sell small amounts through "wharf sales".⁵⁶

A system of "deemed values" encourages commercial fishers to have sufficient ACEs to cover the species and amount of fish caught. When fishers have insufficient ACEs to cover their catch, they are required to pay to the Ministry for Primary Industries the "deemed value" of the excess fish. The level at which deemed values are set is important. If they are too high, they will encourage fishers to (illegally) discard excess fish. However, if they are too low, they will fail to provide an incentive for fishers to acquire sufficient ACEs, or to keep their catch within their allocation, and therefore their combined catch within the TACC.

BIOGEOGRAPHIC REGIONS



FMA = fisheries management areas

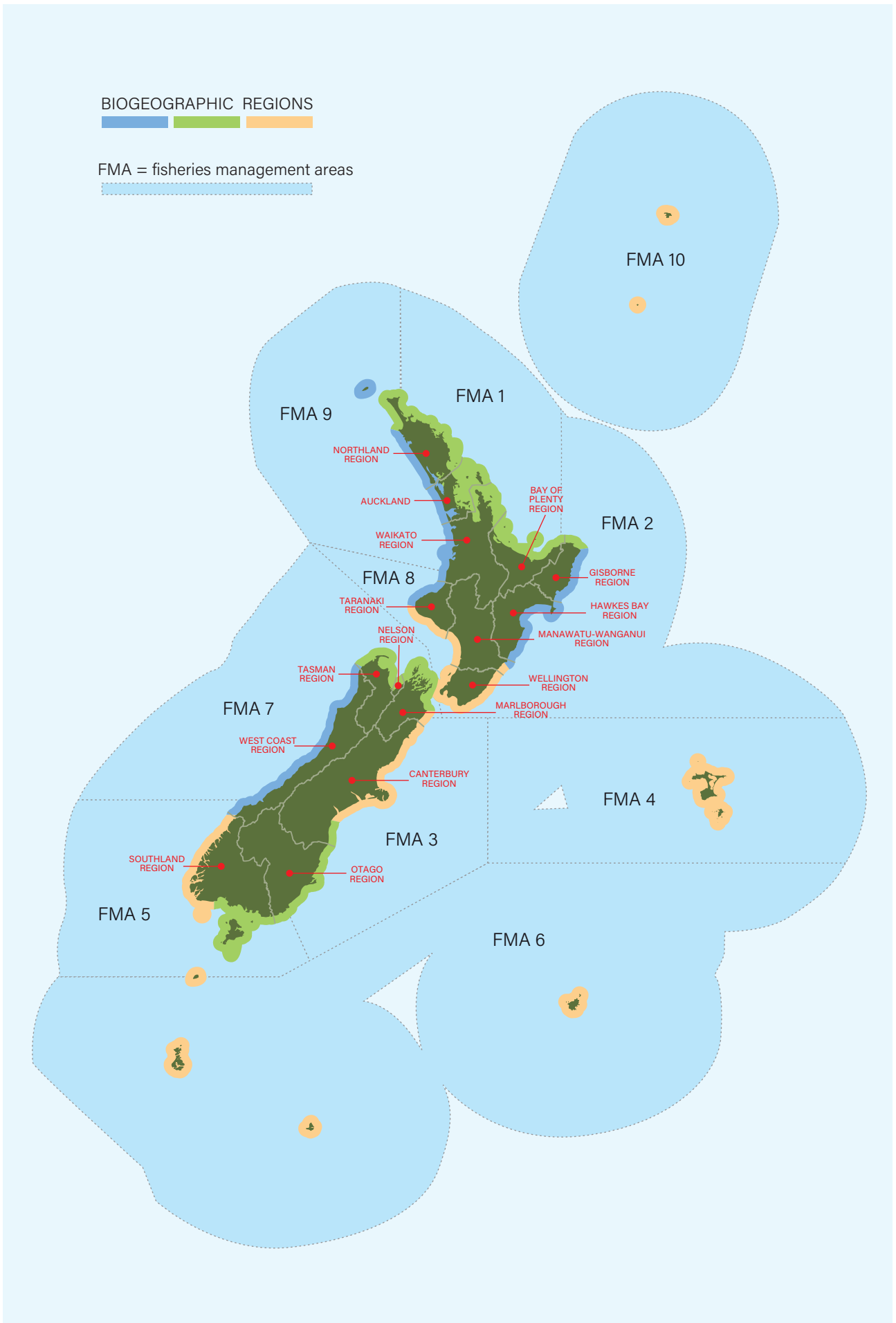


Figure A.1 Delineation of fisheries management areas in Aotearoa New Zealand

Bycatch (of non-target commercial fish species, which often occurs where two or more species co-exist in the same waters) is not always unwanted and is often landed, resulting in the requirement to purchase ACE retrospectively or to make deemed value payments. A portion can be legally discarded⁵⁷ although, under proposed fisheries reforms, almost all catch will need to be landed in the future.⁵⁸

Commercial fishing vessels must also be licensed. Operators must provide catch, effort and landing information, and that is cross-checked against reporting by fish receivers. Recently, Fisheries NZ has rolled out a new real time monitoring system.

There are other restrictions that can be placed on fishing. Hundreds of specific regulatory restrictions exist depending on the location, species and other factors.⁵⁹ For example, 19 QMS species have a minimum legal size.

The issue of Māori fishing rights was brought to a head during the late 1980s, when the QMS was first introduced, with Māori being concerned that their rights to fisheries guaranteed under te Tiriti o Waitangi were being alienated by the Crown. In other words, the creation of perpetual property rights (rather than time bound permits) made the resolution of Māori rights and interests urgent.

An interim settlement of Māori rights was enshrined in the Māori Fisheries Act 1989 which provided for 10 per cent of all existing quota to be given to Māori as well as a cash settlement. Further negotiations culminated in the full and final settlement of Māori commercial claims to fisheries in 1992, which was enshrined in new legislation, the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.⁶⁰ This granted Māori a 50 per cent share in Sealord Products which at that time was the country's largest fishing company. In addition, 20 per cent of any new quota brought into the QMS was to be allocated to Māori. The Māori Fisheries Act 2004 put in place a mechanism for allocating the quota to the various iwi. As a result of these settlements, Māori commercial customary fishing rights have been managed under the QMS in the same way as other commercial fishing interests.⁶¹

As a result of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, Māori non-commercial customary fishing is managed under a different regulatory system which attempts to provide for the rights of Māori to obtain fish directly for consumption and cultural purposes.⁶² Tangata whenua may nominate tangata kaitiaki/tiaki (local customary fishing guardians) who are responsible for issuing customary fishing authorisations within their rohe.⁶³ In addition, there is provision for spatial management through the creation of taiāpure-local fisheries,⁶⁴ mātaītai reserves⁶⁵ and temporary closures.⁶⁶

- Mātaītai reserves – recognise and provide for traditional fishing through local management. They allow customary and recreational fishing but usually don't allow commercial fishing.
- Taiāpure (local fisheries) – estuarine or coastal areas that are significant for food, spiritual or cultural

reasons. They allow all types of fishing and are managed by local management committees..

- Temporary closures and restrictions on fishing methods – areas that are temporarily closed to fishing or certain fishing methods.

No authorisation is required to undertake recreational fishing. Recreational harvest is managed under the Fishing (Amateur Fishing) Regulations 2013, with the prime tools used being daily bag limits, species size limits, gear restrictions and some spatial exclusions. There is no overall harvest cap for recreational take or an obligation on recreational fishers to report their catch. Many Māori still fish under the recreational regulations, as they don't require prior permission, rather than under customary fishing authorisations. Thus "Māori" fisheries is by no means the same thing as customary fisheries – Māori are active in commercial, customary and recreational fishing.

The upshot is that there are three quite different frameworks for fishing the same stocks in Aotearoa New Zealand, and that can cause tension. These operate within the joint framework of the TAC set for each stock by the Minister of Fisheries. The TACC must not exceed the TAC, and when setting the TACC, allowance must be made within the ceiling of the TAC for any customary and recreational harvest as well as other sources of fishing-related mortality including illegal fishing.

Under section 13 of the Fisheries Act, the Minister is required to set a TAC that maintains each stock at or above a level that can produce the "maximum sustainable yield" (B_{MSY}). Where a fish stock is below its estimated B_{MSY} , the Minister is required to set a TAC which will enable the stock to increase to a level at or above it. Before setting a TAC, the Minister must consider best available information and conservation needs.

The Minister is also required to set the TACC which specifies how much of the TAC can be harvested by commercial fishers. The TACC must not exceed the TAC and the Minister must "allow for" Māori customary non-commercial fishing interests and recreational interests (as well as estimating other causes of fish mortality) before setting or adjusting the TACC. Where fish stocks are shared between commercial, recreational and/or customary fishers, the Act provides no guidance as to what proportion of the TAC should be allocated to each sector. This is a matter which is left up to the discretion of the Minister.⁶⁷ The Fisheries Act is therefore not just about ensuring that stocks are sustainable and impacts of fishing on the marine environment are managed, but it also performs an allocative function by determining who can take what amounts of fish.

To prevent monopolisation of any stock, regulations are in place to help ensure no quota owner holds more than a certain percentage of quota in any particular stock or species. These are generally 35 or 45 per cent of the quota of any species, with a 20 per cent limit for bluenose, a 10 per cent limit for crayfish stocks and a 20 per cent limit for pāua stocks.⁶⁸

The TAC and TACC are the primary sustainability measures for a stock, but the Minister may also establish other sustainability measures to control the effects of commercial and other fishing on a fish stock, on protected species or on the marine environment more generally. These measures may include restrictions on fishing methods, the size of fish taken, and where and when fishing may be undertaken. The Act provides for a conservation services levy, which seeks to address the effects of fishing on protected species.⁶⁹ The QMS is therefore not synonymous with the wider Fisheries Act, because the latter also includes sustainability measures and management of recreational and customary fishing (see Figure A.2 below).

The Marine and Coastal Area (Takutai Moana) Act

Rights to Aotearoa New Zealand’s fisheries resources raised significant issues under te Tiriti o Waitangi, resulting in the complex settlement arrangements described above. Another significant flashpoint in Crown-Māori relations arose over control or “ownership” of the foreshore and seabed itself. This debate was much broader than one about sound environmental management (so did not focus on the RMA) and sought to resolve the issue of whether Māori could claim proprietary rights, exercise customary activities with fewer restraints, and have a stronger role in environmental management. There is a complex history behind the foreshore and seabed debate, but the matter has (for now) been

addressed through the MACA Act. This is a cross-cutting statute, in that it links into various others.

In short, the MACA Act restored a right for Māori to claim customary rights and title over parts of the common marine and coastal area, which had previously been unavailable under the controversial Foreshore and Seabed Act.⁷⁰ The “marine and coastal area” is the area between the line of mean high-water springs and the outer limits of the territorial sea (12 nautical miles from shore), and includes the air space and water space above the land, and the subsoil, bedrock and other matter below.⁷¹ In more practical terms, the marine and coastal area can be considered as the “wet” part of the beach covered by the ebb and flow of the tide, together with the seabed.⁷²

Subject to existing private rights and the establishment of Māori interests (described below), the Act makes it clear that no one can own the foreshore and seabed (including the Crown).⁷³ This remains a relatively novel approach within a largely Western resource management framework that is elsewhere enthusiastic about parcelling up resources and conferring ownership.

One might see the legislation as a political compromise – recognising the mana tuku iho exercised in the marine and coastal area by iwi, hapū and whānau as tangata whenua, while ensuring the protection of the legitimate interests of all New Zealanders in the marine and coastal area. As such, while not conferring ownership on the Crown, the Act safeguards access rights for all New Zealanders as well as fishing and navigation rights.⁷⁴ The Act also recognises and protects the exercise of existing lawful rights and uses in the marine and coastal area.

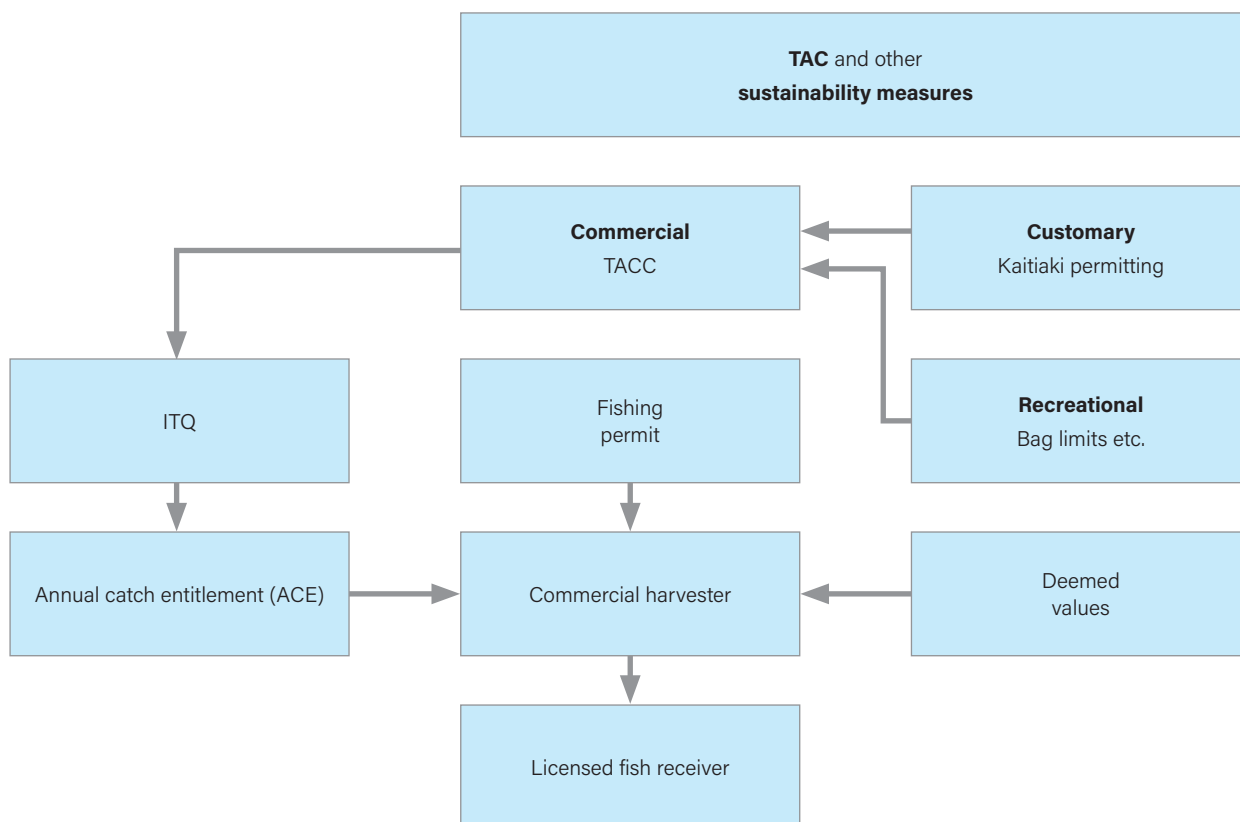


Figure A2 Key elements of Aotearoa New Zealand’s fisheries management system

However, the Act establishes ongoing *processes* by which tangata whenua can claim various rights, although few are conferred automatically. There are three key mechanisms under the Act.⁷⁵ Affected iwi, hapū and whānau have the right to participate in conservation processes in the common marine and coastal area.⁷⁶ There is also a process to apply for recognition of a protected customary right, or customary marine title, whether by direct negotiation with the responsible Minister on behalf of the Crown; or by an order of the High Court.⁷⁷ A protected customary right is a right that has been exercised since 1840, and continues to be exercised in a particular part of the common marine and coastal area in accordance with tikanga by the applicant.⁷⁸ Recognition means that consent under the RMA is not required⁷⁹ and that rights holders are not liable to pay coastal occupation charges.⁸⁰ Councils must also consider whether regional plans need to be changed to recognise and provide for plans concerning customary rights, providing a link to the RMA.

The Act establishes a process for claiming customary marine title. Essentially, title can be recognised if an applicant holds the area in accordance with tikanga, and has used it without substantial interruption since 1840.⁸¹ A proprietary interest need not be established. Relevant factors also include whether customary fishing rights have been exercised without interruption.⁸² The courts have confirmed that it is assumed, in the absence of proof to the contrary, that customary interests have not been extinguished.⁸³ Once recognised, customary marine title provides an interest in land, but is not exempt from controls under the RMA or other acts.⁸⁴ However, title holders have broad rights to decline permission for many activities to occur within the title area where a consent is required under the RMA,⁸⁵ or where a conservation activity is proposed (eg a concession or a marine reserve application), with no rights of appeal available.⁸⁶ A large number of applications (190) have been received by the High Court, but only two have been resolved so far. Other claims are progressing through the alternative process of direct negotiation with the Crown.

The Maritime Transport Act

The Maritime Transport Act is, like the Fisheries Act, a sector-specific framework, dealing with shipping.⁸⁷ However, unlike the Fisheries Act, it goes well beyond what is commonly understood as “resource management”, incorporating topics like health and safety at sea, liability for goods, and salvage operations alongside “environmental” elements designed to deal with pollution from ships and prevent oil spills. In other words, the statute spans multiple systems – the oceans management system (as we have defined it) and what we might call the “property” system and the “health and safety” system or, even more broadly, the “transport” system.

This diversity of content in a single sector-focused statute is partly because much of it is a vehicle for translating what has become extremely detailed aspects of international shipping law developed under the auspices of the IMO.⁸⁸ The idea is that if it can all be done through

a single statute, and related schedules and regulations (“maritime rules”), that makes any updates easier to implement.⁸⁹ This is an important consideration when thinking about legislative and institutional design. Its diversity of content is also reflected in its lack of clear purpose – instead, it has a long title that refers to aims as diverse as “to ensure that participants in the maritime transport system are responsible for their actions” and “to regulate maritime activities and the marine environment in the exclusive economic zone and on the continental shelf as permitted under international law”.⁹⁰ Guiding principles emerge from some key provisions⁹¹: promoting maritime safety⁹²; protecting the environment (in relation to maritime activity)⁹³; implementing international obligations⁹⁴; and protection of seafarers⁹⁵. The Act is divided into Parts dealing with the regulation of maritime activity⁹⁶ and those concerned with marine pollution.⁹⁷

A core aim of the Act, and the one most directly relevant to the oceans management system as we have defined it, is to protect the marine environment.⁹⁸ Most notable are restrictions on discharges from ships and design and construction requirements (eg double hulling) to prevent pollution events. Oil spill preparedness and response is also a focus of the Act, and is funded by the imposition of a levy on the industry. Maritime New Zealand has primary responsibility for this.

Designed as part of a suite of transport statutes (land transport, aviation and shipping), the Minister of Transport is responsible for the Maritime Transport Act’s overall implementation.⁹⁹ Maritime New Zealand carries out day-to-day operations under the Act, particularly for maritime safety and marine pollution risks, but liaises closely with the EPA.¹⁰⁰ The Act applies to New Zealand waters, defined as the territorial sea, internal waters, and all rivers and inland waters of New Zealand as well as New Zealand ships anywhere in the world.¹⁰¹

“Conservation” legislation

The phrase “conservation” does not have a definitive meaning, especially in relation to related concepts like “resource management” and “oceans management”.¹⁰² For example, to some the term might conjure up images of indigenous species, particularly those that are threatened. To others, it might be about biodiversity more broadly, or the management of game species.¹⁰³ And to still others, it might be about ensuring that “wild” or “untouched” places still exist. Then there is the conservation of built and historic heritage, which is something quite different again. It is common overseas to think about *resource* conservation, which is really about making efficient use of finite mineral deposits.¹⁰⁴ And when we protect submarine cables and pipelines through marine protected areas, is that also “conservation”?

It is possible for statutes as diverse in their purpose and subject matter as the RMA, EEZ Act, Heritage New Zealand Pouhere Taonga Act 2014, Marine Reserves Act and many others to be regarded as “conservation” legislation. How we define conservation, and whether it is truly a separate

system to others in the marine space, is relevant when it comes to legislative design (see Chapter 6).¹⁰⁵

For now, however, our task is simply to describe the statutes we have at the moment. A convenient way of grouping conservation legislation is the statutes currently administered by the *Department of Conservation*.¹⁰⁶ From an oceans perspective, the most relevant ones are the Conservation Act, the Marine Reserves Act, the Marine Mammals Protection Act, and the Wildlife Act. The RMA and EEZ Act apply across the whole of our marine area, but conservation legislation provides an additional layer of restrictions and obligations in relation to particular areas or species.

The current system's approach to conservation issues has been fairly fragmented, with a number of protective statutes addressing different conservation concerns. Some are species-centric, as in the case of the Wildlife Act or Marine Mammals Protection Act, whilst others are location-specific, like the Marine Reserves Act.¹⁰⁷ Some are highly location specific – these are bespoke statutes that create various forms of one-off marine protected areas such as those around Kaikōura, the Hauraki Gulf, Fiordland and the Sugar Loaf Islands off the coast of Ngāmotu New Plymouth.

Conservation Act

The Conservation Act is not just about marine conservation, but forms something of an overarching framework. It was designed as a way to provide some structure and coherence to the diverse range of older legislation¹⁰⁸ (as was the contemporaneous creation of the Department itself), although existing legislation remained in force alongside it. Extensive cross-references are made to the Conservation Act in more targeted statutes.

In short, the Act creates and empowers the Department of Conservation to protect natural and historic resources (both within protected areas and public conservation land in Aotearoa New Zealand), and provides for the establishment and categorisation of various protected areas. These are managed through hierarchies of general policy instruments, conservation management strategies, and conservation management plans. There are many categories of protected areas on land, but few apply to the marine area beyond the foreshore (essentially, the inter-tidal zone).

For example, conservation parks are about protecting natural and historic resources and providing for recreation, while amenity areas are about protecting indigenous natural and historic resources and fostering their recreational attributes. Other categories include wilderness areas, ecological areas, sanctuary areas, watercourse areas and wildlife management areas. Areas listed in Schedule 4 of the Act may not be mined. The Act also establishes institutions such as Conservation Boards and the New Zealand Conservation Authority.

Marine Reserves Act

The Marine Reserves Act is, as the name suggests, about the establishment and management of marine reserves. Essentially, they are defined areas managed by the Department of Conservation to maintain their natural state, in which fishing and other extractive or harmful activities are prohibited. Their surprisingly narrow purpose is “to provide for the setting up and management of areas of the sea and foreshore as marine reserves for the purpose of preserving them in their natural state as the habitat of marine life for scientific study”.¹⁰⁹ However, the Act also ensures that (subject to preserving the reserve's marine life and general welfare) “the public shall have freedom of access and entry to the reserves, so that they may enjoy in full measure the opportunity to study, observe, and record marine life in its natural habitat”.¹¹⁰

Currently, there are 44 marine reserves in Aotearoa New Zealand, with ten of those in Fiordland.¹¹¹ Marine reserves are often referred to as “type 1” marine protected areas (strong protections), as opposed to “type 2” areas where narrower restrictions apply (eg restrictions on fishing methods, protection of just the seabed etc). Thus marine reserves are only one type of marine protected area. Subject to the provisions of the Act, and any conditions or restrictions, the public has freedom of access and entry to marine reserves. While the Reserves Act 1977 also has a strong focus on public access, use and enjoyment, and has broader objectives, this does not extend beyond the foreshore or coastal land.

Wildlife Act

The Wildlife Act is New Zealand's most spatially broad species-oriented legislation, and applies to both land and sea (including the territorial sea and EEZ). The Act predates modern biodiversity management concerns, and does not distinguish between introduced and indigenous species protection, or common or rare species.¹¹² There is a presumption that all wildlife is absolutely protected under the Act unless it is specifically listed.¹¹³ No one is allowed to kill or capture any animal that is absolutely protected unless a permit is obtained or an exception is provided for. Some exceptions (eg for seabirds) are made for customary harvest.

The term “wildlife” means any animal living in a wild state, but “animal” has a relatively narrow definition and does not include marine mammals or invertebrates.¹¹⁴ However, some marine species and invertebrates have been added to the category of protected wildlife by amendment via schedules to the Act. The upshot of the Act's definitions and inclusions via schedules is that there are relatively few marine species (other than seabirds) subject to the protection of the Wildlife Act. They are listed in Schedule 7A and include various corals, sharks and rays.

Very few fish are listed, presumably because most fish are seen as “stocks” to be managed for consumption under fisheries legislation (even if a stock is collapsed), rather than a species to be managed or protected for

conservation reasons. Furthermore, the accidental killing or injury of protected species is legally defensible (there is a defence to any prosecution) where it occurs as part of a fishing operation, as long as it is reported to authorities.¹¹⁵

Various types of protected areas can also be recognised under the Act: wildlife refuges, sanctuaries (which may prohibit entry of the public), management reserves and districts. With respect to wildlife areas, the Act provides for general policies, management strategies and plans to be developed in a way that generally reflects the Conservation Act. Population management plans can be created by the Minister for particular species of marine wildlife (including the setting of maximum levels of fishing related mortality in specific areas or overall). However, these require the “concurrence” of the Minister of Fisheries before they can take effect.

Marine Mammals Protection Act

The Marine Mammals Protection Act is conceptually similar to the Wildlife Act, but is focused on particular species – marine mammals.¹¹⁶ Many of these are threatened, and that is part of the reason for the Act’s existence. However, it also recognises that marine mammals that may not be threatened, like whales and dolphins, are special and should not be hunted or killed.

There are three key things that the Act does. First, it imposes restrictions on direct interactions with marine mammals. For example, a permit is required to “take” an animal, which includes where people harm, harass, move, injure or attract it. Accidental injury or mortality does not attract liability as long as it is reported. This is to encourage people to provide information, which would not otherwise be easy to obtain, and to recognise that fishing and shipping can unintentionally cause harm to marine mammals (especially if they follow boats in the pursuit of food). Purse seine nets are required to have escape panels to allow marine mammals to escape (but not trawl nets which can also trap the animals).

Secondly, the legislation allows for the creation of marine mammal sanctuaries. These provide havens for where species commonly live and move, and are general enough in purpose to allow for many different restrictions (eg fishing methods such as set netting and trawling, mining, the creation of noise such as from seismic surveying). There are currently eight marine mammal sanctuaries with an additional proposal for a new sanctuary in the Bay of Islands.¹¹⁷

Thirdly, since 1996 the Act has provided for the creation of population management plans. The point is really to ensure the recovery of *threatened* species to non-threatened status, or to prevent populations declining. Plans can, for example, specify a maximum amount of fishing-related mortality for a species, mirroring the approach in the more general Wildlife Act. As under the Wildlife Act, plans require the joint sign off of the Minister of Conservation and Minister of Fisheries, and requires consideration of the impact of the plan on commercial fishing.

Bespoke “conservation” legislation

To add further complexity to the conservation regime, we have a range of bespoke statutes that set up distinct management and institutional frameworks for particular areas. Many of these are for marine areas reflecting the inadequacies of the area-based protection frameworks available under more general legislation.¹¹⁸ They tend to impose an additional layer of management rather than carving out management from broader frameworks like the RMA or Fisheries Act, and to cross-reference to the mechanisms within those statutes rather than creating their own.

The Fiordland (Te Moana o Atawhenua) Marine Management Act applies to a specific area around Fiordland.¹¹⁹ It has regulatory impact, in that it directly creates eight marine reserves within the wider management area (but which are managed under the Marine Reserves Act).¹²⁰ In that sense, it can be seen as legislation creating marine protected areas. It also creates an institution – the Fiordland Marine Guardians – to advise the government on various matters (including fishing, biosecurity, sustainability and conservation), and it directly amended the Southland Regional Coastal Plan developed under the RMA (including recognition of high value areas outside marine reserves, called “China shops”, and provisions relating to biosecurity).

The legislation was a mechanism by which a wide ranging and non-statutory strategy, developed by a consortium of various stakeholders (the Fiordland Marine Conservation Strategy) was implemented. In short, it recognises that various legislative and institutional silos (including the RMA, Marine Reserves Act, Biosecurity Act and Fisheries Act) are intimately connected, and that more integrated management is important in places of high conservation value like Fiordland.

Te Korowai o Te Tai-o-Marokura Strategy is another non-statutory marine protection initiative that has resulted in bespoke legislation for implementation: the Kaikōura (Te Tai o Marokura) Marine Management Act 2014. The purpose of the Act is to recognise the unique coastal and marine environment and distinctive biological diversity and cultural heritage of the marine environment around Kaikōura.¹²¹ It has a strong conservation flavour. As with the Fiordland legislation, it directly creates a number of protected areas that could have been created under more general legislation (a marine reserve, two marine mammal sanctuaries, and mataitai and taiāpure area management tools for customary fishing), and amends fisheries regulations relating to recreational fishing.¹²² It also established the Kaikōura Marine Guardians, which are appointed by the Ministers of Conservation and Fisheries to represent the interests of Ngāi Tahu, the Kaikōura community, conservation, environment, biosecurity, education, fishing, science and tourism.¹²³ The Guardians provide advice that must be taken into account by a variety of Ministers and those exercising functions under multiple marine statutes.

Like the Fiordland legislation, the Act is another place-based mechanism through which tools under multiple more general frameworks are implemented in a coordinated way, together with another layer of institutional arrangements to oversee it.

Another place-based statute administered by the Department of Conservation, the Hauraki Gulf Marine Park Act, establishes the Hauraki Gulf Marine Park.¹²⁴ The Park itself extends from the northernmost boundary of Auckland Council down to the southernmost boundary of the Hauraki District, and includes the islands in the Gulf. The catchment area feeding into the Marine Park extends as far south as the South Waikato district.

However, despite its name and the establishment of a new management area, the Act is not really about establishing a “marine protected area” and should not be regarded as a purely “conservation” statute. It does not itself create regulatory restrictions. Instead, it can be regarded as an effort to manage a particular spatial area (one that is among the most heavily used and congested in the country) in a more integrated way by connecting up *other* regimes and tapping into their machinery. This spatial legislative overlay is one way in which better connections can be made across the system in a way that responds to the unique circumstances and pressures of a particular place. To this end, the Act:

- Establishes the Hauraki Gulf Forum, which is a “hybrid” entity comprised of the members of other institutions, including representatives of the Ministers of Conservation, Primary Industries and Māori Development, tangata whenua, Auckland Council, and other local authorities. The Forum does not have regulatory powers, but instead is charged with coordinating its members’ functions, identifying strategic issues and priorities for action, and preparing a three yearly report on the state of the Gulf. This has showcased an alarming amount of degradation.¹²⁵
- Provides for matters of national significance and objectives, which are deemed to form an NPS for the purposes of the RMA. They therefore act alongside the NZCPS when councils are creating and changing plans and when consent applications are considered.
- These matters must also be “had regard to” when the Minister is setting sustainability measures under the Fisheries Act. Those with functions under a lengthy list of other legislation must also have particular regard to these matters, including under the Heritage New Zealand Pouhere Taonga Act, the Local Government Act, the Biosecurity Act and the various conservation statutes described above.

In short, the Act creates a more nuanced, place-based layer of objectives to be considered under multiple other frameworks and an institutional and reporting framework for better integrating the roles of existing entities. What it does not do directly is create a framework for marine spatial planning. However, the Forum and its agencies

were key players in a non-statutory spatial planning initiative for the Gulf that was recently conducted: Sea Change – Tai Timu Tai Pari.

The Sugar Loaf Islands Marine Protected Area Act is an older piece of legislation, enacted in the same year as the RMA.¹²⁶ As such, it is much more narrowly focused on establishing a single protected area than (as in Fiordland and the Hauraki Gulf) making more integrated use of different bits of legislation. The Act is designed “to provide for the setting up and management of the Sugar Loaf Islands Marine Protected Area for the purpose of protecting that area of the sea and foreshore in its natural state as the habitat of marine life, and to provide for the enhancement of recreational activities”, and its purpose is “to ensure that the scenery, natural features, and ecosystems of the Protected Area that should be protected and conserved by reason of their distinctive quality, beauty, typicality, or uniqueness are conserved”.¹²⁷ This is much broader than the purpose of the Marine Reserves Act (scientific research), but its restrictions are less strict; mining and non-recreational anchoring is prohibited, but fishing is not.¹²⁸ The Act is not just about the marine area, in that it also establishes sanctuary areas on the islands themselves; the surrounding water is deemed to be a “conservation park” under the Conservation Act. Ironically, this marine protected area is now bordered by a more recent marine reserve (Tapuae) created in the conventional manner,¹²⁹ so the overall area is effectively covered by two separate protected areas under quite different rules.

Further marine reserves were created under the Subantarctic Islands Marine Reserves Act 2014, which protects the territorial sea surrounding certain subantarctic islands.¹³⁰ The subantarctic islands themselves are classified as Nature Reserves.¹³¹

The Biosecurity Act

The Biosecurity Act is about dealing with pests and unwanted organisms, for both economic and environmental reasons. It is a framework for border controls aimed at preventing unwanted organisms from entering the country, including on ships, for establishing surveillance to detect organisms once they have arrived, and for the control and eradication of pests once they have become established. It applies out to the limits of the EEZ (as of 2012) and spans freshwater terrestrial and marine environments (including ports).

Functions under the Biosecurity Act are split between the Ministry for Primary Industries, other government departments, and regional councils. The Ministry for Primary Industries oversees the implementation of the legislation, undertakes border control, manages national surveillance programmes, carries out responses to incursions and manages national control programmes. Regional councils monitor established pests and prepare regional pest management plans¹³² and pathway management plans.¹³³ These cannot be inconsistent with

regional policy statements and regional plans made under the RMA.

Regional councils are also required, under a National Pest Management Plan of Action, to provide leadership by promoting coordination of pest management between regions. A National Policy Direction for Pest Management¹³⁴ was developed in 2015 to improve the alignment and consistency of pest management plans and programmes across the country.

Mining legislation

The Continental Shelf Act, which previously formed the much less robust framework under which some of the EEZ Act's decisions are now made,¹³⁵ remains in existence. However, it is now primarily a vehicle for making decisions about mining, and piggybacks on and extensively cross-references the more evolved framework of the Crown Minerals Act. Essentially, much of the Continental Shelf Act has become a shell statute for extending most of the provisions of the Crown Minerals Act to the EEZ and extended continental shelf, and does not itself allow for new permits to be granted under it.¹³⁶

The Crown Minerals Act is about "promoting" the exploitation of Crown-owned minerals for the benefit of New Zealanders,¹³⁷ and is primarily used as a means for the Crown to allocate rights (often through competitive processes like block offers) to explore for and mine its property (as well as access arrangements so miners can get to them).¹³⁸ That includes oil and gas.¹³⁹

The minerals regime is highly discretionary (and involves the development of minerals programmes and the issuing of permits largely in isolation of other regimes like the RMA).¹⁴⁰ The current government has signalled that it will not be allowing new offshore oil and gas exploration (largely for climate change reasons).¹⁴¹ Authorisation to explore for or mine minerals does not, however, remove the need to obtain other permissions, for example under the RMA or EEZ Act.¹⁴² It is primarily an allocative and access framework, not an environmental one. To complement that separation, the RMA is explicit that sustainable management does not include the rate of depletion of mineral resources.

The Minister of Conservation and the Minister of Energy and Resources have also created a *Code of conduct for minimising acoustic disturbance to marine mammals from seismic surveys operations*.¹⁴³ This Code is more protective than the existing marine mammal sanctuary restrictions (imposed under the Marine Mammals Protection Act), and mitigation measures are required across the entire historic range of the Māui dolphin out to the 100m water depth contour.

Climate change legislation

Climate change mitigation and adaptation are becoming increasingly central issues within the context of resource management, and that includes marine management.

To date, climate change has primarily been addressed through the Climate Change Response Act, which has established an emissions trading scheme designed to allow greenhouse gas emissions to be traded and offset, and to meet New Zealand's international obligations.¹⁴⁴

The Climate Change Response (Zero Carbon) Amendment Act was enacted in 2019. This has strengthened the Climate Change Response Act considerably beyond being a framework for emissions trading. It endows the Act with a stronger purpose, a legislated set of targets, a carbon budgeting framework, and roles for a new and independent Climate Change Commission. There are to be national level plans for emissions reductions (expected imminently at the time of writing) and adaptation, and an initial risk assessment has been produced to inform a national adaptation plan. The Climate Change Commission has recently provided its advice to the government in an extensive report – *Ināia tonu nei: A low emissions future for Aotearoa* – which must be considered.¹⁴⁵ This made reference to the importance of "blue carbon" (carbon stored in marine environments), but concluded that more scientific information is required before it can be included in accounting or reporting.¹⁴⁶

In contrast, the RMA does not address climate change mitigation in a meaningful way (except to promote renewable energy generation in a very general sense). Until recently, councils were expressly prohibited from considering the climate impacts of greenhouse gas discharges, and central government has not chosen to exercise its powers to fill that gap through national direction.¹⁴⁷ That restriction has now been removed, but it is still unclear what role councils are expected to play under the RMA, including in their management of the coastal marine area (eg through exercising powers to control fishing activities like bottom trawling to reduce the release of greenhouse gases from the seabed).¹⁴⁸

Heritage New Zealand Pouhere Taonga Act

Historic heritage is partly protected under the RMA. Section 6(f) of the Act requires all decision-makers to recognise and provide for the protection of historic heritage from inappropriate use and development as a matter of national importance. Regional plans can impose restrictions to protect marine heritage (eg shipwrecks) in the coastal marine area, but few do so. On land, historic heritage can be more specifically addressed through a heritage order, which ensures that protected features or places are identified in the relevant district plan.¹⁴⁹ But heritage orders are not applicable to the marine environment, because they are implemented through scheduling in *district* plans.

Alongside the RMA is a statute dedicated solely to heritage: the Heritage New Zealand Pouhere Taonga Act. Its purpose is to promote the identification, protection, preservation and conservation of New Zealand's historical and cultural heritage. Heritage New Zealand Pouhere Taonga (an autonomous Crown entity) is tasked with

maintaining the New Zealand Heritage List/Rārangi Kōrero (previously the Historic Places Register), and is informed by the Māori Heritage Council. The purposes of the List are to inform the public about historic heritage, to notify the owners of historic heritage, and to be a source of information for the purpose of more formal protections through the RMA. The List identifies historic places, historic areas, wāhi tūpuna, and wāhi tapu areas. Those can include marine sites, such as submerged structures, sites of cultural significance and shipwrecks.¹⁵⁰ However, the List does not have direct regulatory consequences – protections need to be progressed through tools under the RMA. Furthermore, many marine heritage sites have yet to be identified, let alone listed – for example, only around 150 shipwrecks have been located despite over 2,000 being known.¹⁵¹

That said, Heritage New Zealand Pouhere Taonga also has statutory responsibility for the identification and protection of archaeological sites (where linked to human activity predating 1900). These are automatically protected under the Act and an archaeological authority is required before undertaking an activity which may modify or destroy part or all of an archaeological site. In contrast to the Heritage List, this is a tool that has regulatory effect.¹⁵² This means that early shipwrecks are protected without needing to be listed or identified in a regional plan.

Submarine Cables and Pipelines Protection Act

The Submarine Cables and Pipelines Protection Act is, as its name suggests, designed to protect cables and pipelines on the seafloor from activities that could impact them. The main way in which it does so is through the creation of protected areas through orders in council. These areas prohibit fishing¹⁵³ and anchoring activities which impact the seabed. It is an offence to cause damage to a submarine cable or pipeline, whether wilfully or negligently. The Act also addresses liability for any harm caused. It applies in the coastal marine area and the EEZ. Penalties for damage can be severe, reflecting the importance of underwater cables and pipelines (eg for connecting the North and South Islands and Aotearoa New Zealand to the rest of the world). There are currently 10 protected areas established under the legislation, including those protecting the Cook Strait electricity and communications cables, infrastructure in the Hauraki Gulf, and the Maui gas field pipelines.

There are cross-references between the Act and the Maritime Transport Act – in particular, it is deemed to be a “maritime Act” and therefore rules can be made under the Maritime Transport Act for the purposes of the Submarine Cables and Pipelines Protection Act. This is a way that the complex machinery of decision-making under the Maritime Transport Act can be deployed in the service of statutes that have a more specific purpose (not dissimilar to the way in which the Continental Shelf Act makes use of the tools under the Crown Minerals Act).

Other substantive legislation

Some statutes do not address the management of marine activities directly, but regulate or guide human activities that can have consequential impacts on the oceans. Notable are the Waste Minimisation Act, Litter Act, Hazardous Substances and New Organisms Act, Land Transport Management Act, Urban Development Act and Building Act.

Waste Minimisation Act

Waste management (in the sense of the disposal of unwanted material)¹⁵⁴ is the concern of a number of statutes and institutions in the current system. The RMA and EEZ Act, for example, deal with pollution by prohibiting discharges of contaminants (including into the coastal marine area and EEZ) unless expressly allowed. With few exceptions, marine dumping is prohibited – reflecting the requirements of international law under the London Dumping Protocol. The Maritime Transport Act restricts discharges from ships.¹⁵⁵

However, we also have a more targeted framework for waste *minimisation*. The Waste Minimisation Act seeks to protect the environment from harm and to provide environmental, social, economic and cultural benefits.¹⁵⁶ It is a more proactive regime than the RMA, in that it tries to prevent waste issues from arising in the first place, rather than just requiring consent for their disposal or dealing with the effects of things that can become waste when discarded. To do that, it allows for harmful “priority products” to be declared, and mandatory product stewardship schemes created (cradle to the grave management of the product).¹⁵⁷ Businesses can also be accredited in relation to voluntary schemes.¹⁵⁸ Some products can be banned altogether (we have recently seen a ban on single-use plastic bags, and the government has recently announced an intention to phase out other plastic products like plates, cotton buds, straws and fruit labels).¹⁵⁹ In addition, prohibitions have been imposed on personal products containing microbeads (such as health and beauty products), which can cause harm to aquatic life.¹⁶⁰

The framework also allows for the development of incentives for waste reduction. For example, the government has recently signalled the introduction of measures like a deposit refund scheme.¹⁶¹ Funding is another component of the framework; a waste disposal levy is imposed on disposal facilities (and is set to expand).¹⁶² Half of this is received by territorial authorities and the other half made available to projects aiming to reduce waste through the Waste Minimisation Fund. The Act also creates a Waste Advisory Board to advise the Minister.¹⁶³ The legislation specifically outlines its relationship with the Local Government Act, given that waste management needs to be planned for under the latter’s long-term and annual plans.

Plastic waste is particularly problematic in the marine environment (see Chapter 2), and can have significant impacts on marine wildlife (including seabirds, fish and

marine mammals). A lot of this comes from land, where it is discarded and finds its way to sea, while other plastic waste comes from boats (eg fishing gear) and marine farms (eg ropes and buoys). Microplastics are also increasingly prevalent, finding their way into the marine food chain. Thus while the Waste Minimisation Act is not a “marine” focused statute, it is an important component of the oceans management system. It is currently under review by the Ministry for the Environment.

Litter Act

Alongside the Waste Minimisation Act is the narrower Litter Act, which deals with one particular problem of waste disposal: littering. This is significant, because much of the waste that ends up in the marine environment comes, not from large scale activities that require consent under the RMA or EEZ Act, but rather from casual and small-scale non-compliance from individuals who throw away things like cigarette butts, cans and straws. While the Waste Minimisation Act is partly designed to reduce the amount of material having to go to landfill, the Litter Act is focused on making sure the stuff that (unfortunately) *does* need to go to landfill does not end up in other places – like the oceans.

Among other things, the Act provides for enforcement officers and litter wardens who may issue fines and abatement notices for littering offences, allows councils to require the removal of litter, and provides for the making of bylaws.¹⁶⁴ The Ministry for the Environment is in the process of reviewing the Litter Act alongside the Waste Minimisation Act.

Hazardous Substances and New Organisms Act

New Zealand has a more targeted framework for the management of hazardous substances and genetically modified organisms, under the Hazardous Substances and New Organisms Act. While there is some tension and overlap between what the RMA and this Act are concerned with, the latter controls some actions or activities that the RMA does not (eg the import, manufacture and use of manufactured chemicals that have hazardous properties – not just their release to a receiving environment).¹⁶⁵ Import or manufacture requires approval, which places controls on matters such as storage, identification, emergency management and disposal. The Act is also the place in which the control, testing and release of genetically modified organisms is regulated.¹⁶⁶ While it is not a “marine” statute as such, and to some extent is concerned with health and safety rather than environmental health, the Act confers powers in relation to the transport, importation, packaging and labelling of hazardous substances at sea (eg during shipping). The EPA plays the primary role under the Act.

Legislation for land-based development

Various other legislation can be mentioned briefly. The Local Government Act is concerned with the purpose, structure and activities of regional councils, territorial authorities and unitary authorities. Under the Act, councils are charged with producing long-term plans (describing the activities and community outcomes to be pursued over the coming 10 years, and including both a financial and infrastructure strategy) and annual plans (including budgets), which support the achievement of the long-term plan.⁴⁸ In other words, among other things, the Act is a framework for how councils spend money.

Funding has implications for the ways in which councils conduct functions (including marine-focused functions) under other legislation like the RMA. Councils are also in charge of local roads and are obliged to assess the need for, and provide, water services (with some exceptions),⁴⁹ and some other public services.⁵⁰ This is particularly significant for marine outcomes, because investments in waste water and stormwater infrastructure, as well as the location and design of roads, can have impacts on the discharge of contaminants into the sea. We have recently seen how underfunding of three waters infrastructure contributes to regular marine pollution in urban areas.¹⁶⁷ The Land Transport Management Act – a framework for councils and Waka Kotahi/New Zealand Transport Agency to plan, fund and deliver infrastructure like roads – and the Land Transport Act (which, among other things, allows the setting of emissions standards for vehicles) also have relevance to the health of our oceans. When it comes to runoff from roads and other infrastructure, the RMA is really the ambulance at the bottom of the cliff. Standards for motor vehicles; design and materials requirements for infrastructure and buildings; and the funding to upgrade and fix broken pipes; are where many problems are created in the first place.

The Urban Development Act is also potentially significant from a marine perspective, in the same way that the RMA and infrastructure legislation is. Urban development can create a variety of pressures on the oceans, such as sediment from construction, ongoing runoff from impermeable surfaces, contaminants from products used by more people living in higher concentrations, wastewater pressures, and generally more human activities on beaches and out on boats. The particular significance of the Urban Development Act is its ability to empower and drive large scale urban development (suburb scale) that – arguably – has weaker environmental safeguards than the RMA (including with respect to the coastal marine environment). We investigated this in our previous work on resource management reform in the urban context.¹⁶⁸

The Building Act is, as its name suggests, focused on land. We tend not to build much at sea.¹⁶⁹ The environmental impacts and occupation aspects of marine construction are covered by the RMA and EEZ Act, but the actual design requirements for offshore installations (and ships)

are regulated instead under the Maritime Transport Act. However, the Building Act has incidental relevance in that the design of buildings on land, once in place, can have implications for the marine environment. For example, “green” buildings can reduce contributions to greenhouse gas emissions that impact the sea, material choices can eliminate the leaching of some contaminants (eg heavy metals) into stormwater systems (which end up in the sea), while systems for onsite stormwater and rainwater management and green roofs can reduce the contamination that reaches the marine environment.

Legislation establishing the system’s architecture

We also have a number of statutes that are concerned with establishing what might be called the architecture of the system. That includes creating institutions with multiple roles under other statutes, producing cross-cutting strategies, establishing jurisdiction, and outlining general processes that feed into other acts.

Territorial Sea, Contiguous Zone and Exclusive Economic Zone Act

In practice, this Act has a limited function.¹⁷⁰ Essentially, it formalises the country’s EEZ in domestic law, and delineates the boundaries of the territorial sea and contiguous zone in accordance with the United Nations Convention on the Law of the Sea. Curiously, the Act also clarifies that the Marine Mammals Protection Act applies in the EEZ.¹⁷¹ It is administered by the Ministry of Foreign Affairs and Trade.

There is also an interesting regulation-making power in the Act, which provides (among other things) that “Where no other provision is for the time being made by any other enactment for any such purposes, [regulations can be made] for all or any of the following purposes [including] prescribing measures for the protection and preservation of the marine environment ... [and] regulating the exploration and exploitation of the ... sea for the production of energy from the water, currents, and winds, and for any other economic purposes”¹⁷² We are not aware of the existence of any such regulations, which would find a more comfortable home in more targeted and developed legislation.

Environment Act

The Environment Act establishes important aspects of the system’s institutional architecture.¹⁷³ While some cross-cutting institutions (like the Environment Court, Department of Conservation and Conservation Authority) are established/continued under legislation where they have their primary or initial role (eg the RMA and Conservation Act),¹⁷⁴ both the Parliamentary Commissioner for the Environment and the Ministry for the Environment are established under the Environment Act.¹⁷⁵ This act of creation (and associated mandate) is the

Act’s primary purpose.¹⁷⁶ The Ministry for the Environment has a broad statutory mandate, including providing advice to the Minister on a broad range of environmental matters, most which have implications for the marine environment. It is fairly unusual for a ministry to be established formally in legislation.

The Parliamentary Commissioner for the Environment is a particularly significant framework feature of the system. This officer of Parliament has a wide but firmly protective mandate, and is charged with conducting investigations and reviews on environmental issues.¹⁷⁷ It is strongly independent, and reports directly to Parliament. The Commissioner has produced a number of reports concerning the marine environment, including a recent one on the management of estuaries.¹⁷⁸

Environmental Protection Authority Act

The Environmental Protection Authority Act establishes the EPA as a Crown entity, although it is given particular roles mainly under other acts (eg the RMA, EEZ Act, Climate Change Response Act and hazardous substances legislation).¹⁷⁹ The Act is significant, however, because it sets out the institutional structure (including with respect to its independence from government) and mandate of the EPA, which has important roles under marine legislation (eg the EEZ Act) as well as more general functions in the marine environment (eg enforcement under the RMA).

Environmental Reporting Act

We also have a dedicated Environmental Reporting Act, which requires the government (the Ministry for the Environment and Statistics New Zealand) to issue information on the state of the environment at a national level, including a rolling cycle of reporting on particular domains (eg the atmosphere and climate, air, freshwater, land, and marine).¹⁸⁰ The marine domain report was last released in 2019, and marine reporting is rolled into synthesis reporting every three years.

Other statutes

Finally, it is worth noting other statutes that exist well away from the core of the oceans management system, but which are not entirely disconnected from marine outcomes. For example, the Public Finance Act is concerned with the central government budgeting process (and is linked to the Treasury’s wellbeing framework against which public investment decisions are measured); the Education Act is concerned with the school curriculum, and therefore has implications for how a future generation of oceans leaders and politicians are educated; and the Companies Act outlines corporate obligations and responsibilities in relation to shareholders and society. There may be many other relevant frameworks like these that are not currently concerned with the marine environment, but which nevertheless provide opportunities to improve marine outcomes.

ENDNOTES

- 1 Greg Severinsen *Reform of the Resource Management System: A model for the future. Synthesis report* (Environmental Defence Society, Auckland, December 2019) at 57.
- 2 Resource Management Act 1991, s 5.
- 3 See Greg Severinsen and Raewyn Peart *Reform of the resource management system: The next generation* (EDS, 2019) at 97; *Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593. See also *Report of the Minister for the Environment's Resource Management Act 1991 Principles Technical Advisory Group* (2012).
- 4 Sections 9, 11, 12, 13, 14, 15, 15A and 15B of the RMA impose restrictions on the use of land, subdivision, the use of the coastal marine area, the use of lake and river beds, the use of water, and the discharge of contaminants into the environment.
- 5 In accordance with their property rights, of course.
- 6 Resource Management Act 1991, s 9.
- 7 As discussed later, this captures the removal of fish, which is managed under other frameworks, notably the Fisheries Act.
- 8 This cannot be permitted in a plan, and must have a resource consent.
- 9 This cannot be permitted in a plan, and must have a resource consent.
- 10 Which is defined as including the seabed, hence its inclusion in the coastal marine area.
- 11 Express authorisation is not needed in some circumstances (essentially where the Act deems effects as not being significant).
- 12 Express authorisation is not needed in some circumstances (essentially where the Act deems effects as not being significant for aquatic life).
- 13 Unless a consent can be, and is, obtained. There is also a deemed prohibited activity for the dumping or storage of radioactive waste and the storage of toxic waste.
- 14 This is also expressly not a function of regional councils under the Act. However, somewhat curiously, s 12(3) which says that no one can do anything if it contravenes a planning instrument, is phrased widely enough to encompass fishing activity.
- 15 Resource Management Act 1991, s 30(2).
- 16 New Zealand Coastal Policy Statement 2010. Some sections in bespoke legislation for the Hauraki Gulf are deemed to be an NZCPS, but the NZCPS prevails in the event of conflict.
- 17 Resource Management (National Environmental Standards for Marine Aquaculture) Regulations 2020.
- 18 *Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38, [2014] 1 NZLR 593.
- 19 Resource Management Act 1991, s 30.
- 20 Section 31.
- 21 Local Government (Auckland Transitional Provisions) Act 2010. See Section 152(3) and pt 1.
- 22 Resource Management Act 1991, ss 58B-58J.
- 23 The Act classifies activities into six primary categories: permitted, controlled, restricted discretionary, discretionary, non-complying and prohibited.
- 24 Greg Severinsen and Raewyn Peart *Reform of the resource management system: The next generation* (Environmental Defence Society, 2019), ch 10.
- 25 For example, councils are heavily restricted from considering impacts of activities on climate change. Controlled or restricted discretionary activity status can also constrain the matters that can be considered by a consent authority.
- 26 Resource Management Act 1991, pt 6AA.
- 27 Parts 7 and 7A; s 31(1)(fa).
- 28 *Fleetwing Farms Limited v Marlborough District Council* [1997] 3 NZLR 257 (CA).
- 29 Often for significant infrastructure having public importance (eg networks like transmission lines, prisons, schools etc).
- 30 Resource Management Act 1991, pt 8.
- 31 Part 9.
- 32 Part 12.
- 33 For example, that established between Taupō District Council and the Tūwharetoa Māori Trust Board on 17 January 2009. This agreement provides for publicly notified resource consents and private plan change applications, in relation to multiply owned Māori land within the rohe of Ngāti Tūwharetoa and within the Taupō district, to be decided by a panel of decision makers comprising two commissioners chosen by each party and a jointly appointed fifth commissioner and chairman.
- 34 See Greg Severinsen and Raewyn Peart *Reform of the resource management system: The next generation* (Environmental Defence Society, 2019), ch 9.
- 35 Resource Management Amendment Act 2019.
- 36 Not *physical* resources, as under the RMA. This is because of the influence of international law and limits on jurisdiction.
- 37 Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012.
- 38 Parts 3 and 3A.
- 39 Partly to implement strong international agreements on dumping under the London Protocol.
- 40 See generally Catherine Iorns Magallanes and Greg Severinsen "Diving in the deep end: Precaution and seabed mining in New Zealand's exclusive economic zone" (2015) 13 NZJPI 201.
- 41 *Trans-Tasman Resources Ltd v Taranaki-Whanganui Conservation Board* [2020] NZSC 67 granted leave to appeal to the Supreme Court.
- 42 Barry Barton "Offshore Petroleum and Minerals: Plugging the Gaps in the Present Framework" (paper presented to Coastlines: Spatial Planning for Land and Sea Conference, Auckland, 1-2 June 2011).
- 43 See Greg Severinsen and Raewyn Peart *Reform of the resource management system: The next generation* (Environmental Defence Society, 2019) at 150, where we noted that protections for fish (to be able to continue to consume them) are imposed for quite different reasons to the protection of, say, kiwi.
- 44 "Fish" includes some other surprising marine living resources like seaweed.
- 45 However, the Act applies to all fish, including freshwater species.
- 46 For example, the environmental impacts of removing minerals from the seabed are still managed under the RMA and EEZ Act, despite additional authorisation being required to explore and mine minerals under the Crown Minerals Act and Continental Shelf Act.
- 47 For example, Treaty of Waitangi (Fisheries Claims) Settlement Act.
- 48 "Utilisation" under s 8(2)(b) of the Act means "conserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic, and cultural well-being."
- 49 See RMA, s 5; and EEZ Act, s 10.
- 50 See, for example, Waitangi Tribunal "Muriwhenua Fishing Report" (1998) (Wai. No. 22), Parts II and III.
- 51 The New Zealand 200 nautical mile EEZ is divided into 10 areas, each known as a fishery management area. These are based on likely stock boundaries as well as administrative considerations. The standard fishery management areas are the basis of quota management areas for most fish stocks: Fisheries New Zealand "Fisheries Management Area" <<https://fs.fish.govt.nz/Page.aspx?pk=78&dk=1212>>.
- 52 Ministry for Primary Industries "Fish Quota Management System" <www.mpi.govt.nz/legal/legislation-standards-and-reviews/fisheries-legislation/quota-management-system/>.
- 53 The total number of quota shares for a fish stock is always 100,000,000: Ministry for Primary Industries "Commercial fishing annual catch entitlement (ACE)" (16 November 2020) <www.mpi.govt.nz/fishing-aquaculture/commercial-fishing/operating-as-a-commercial-fisher/commercial-fishing-annual-catch-entitlement/>
- 54 For most species, the fishing year starts in October.
- 55 Eg TAC, TACC, and deemed values.
- 56 See Fisheries Act 1996, s 192(2)(b).
- 57 Fisheries Act 1996, s 72 and sch 6. These provisions contain a list of stocks which may be returned to the sea or other waters and the stated requirements for the return to be legal.
- 58 Minister for Ocean and Fisheries *Fisheries Amendment Bill: Strengthening fishing rules and policies: landings and discards* (2 July 2021) at [27].
- 59 For example, see V A Froude and R Smith *Area-based restrictions in the New Zealand marine environment* (Department of Conservation, 2004).
- 60 Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.
- 61 Paul Meredith "Te hī ika – Māori fishing - fisheries management and practice" (12 June 2006) *Te Ara - the Encyclopedia of New Zealand* <www.TeAra.govt.nz/en/te-hi-ika-maori-fishing/page-6>.
- 62 See generally, Ministry of Primary Industries "Managing customary fisheries" (16 November 2020) www.mpi.govt.nz/fishing-aquaculture/maori-customary-fishing/managing-customary-fisheries/.
- 63 Fisheries (Kaimoana Customary Fishing) Regulations 1998 and Fisheries (South Island Customary Fishing) Regulations 1999. See the interpretation sections (s 2) in both sets of regulations for full definitions of tangata kaitiaki/tiaki.
- 64 Fisheries Act 1996, Part 9.
- 65 Fisheries (Kaimoana Customary Fishing) Regulations 1998, regs 18-32; and Fisheries (South Island Customary Fishing) Regulations 1999, regs 17-29C.
- 66 Fisheries Act 1996, ss 186A-186B.
- 67 See *New Zealand Recreational Fishing Council Inc and other v Sanford Limited and others* [2009] NZSC 54.
- 68 Fishserve "Quota Shares" <www.fishserve.co.nz/information/quota-shares>.
- 69 Fisheries Act 1996, pt 14.
- 70 Foreshore and Seabed Act 2004 (repealed).
- 71 Marine and Coastal Area (Takutai Moana) Act 2011, s 9(1).
- 72 P Majurey and C Whata "Maori and Environmental Law" in *Environmental and Resource Management Law* (LexisNexis, online ed, 2021) at [14.60].

- 73 Marine and Coastal Area (Takutai Moana) Act 2011, s 11.
- 74 Sections 26-28.
- 75 Sections 7(a)-(c).
- 76 Section 47(2). Affected iwi, hapū and whānau means "iwi, hapū, or whānau that exercise kaitiakitanga in a part of the common marine and coastal area where a conservation process is being considered", s 47(1).
- 77 Section 94(1).
- 78 Sections 51(1)(a)-(b). Section 51(1)(c) also states that a protected customary right cannot exist if it has been extinguished as a matter of law. An "applicant group" is defined at s 9(1) to include (a), "[one] or more iwi, hapū, or whānau groups that seek recognition [...] of their protected customary rights or customary marine title by a recognition order or an agreement [...]".
- 79 Section 52(1).
- 80 Sections 52(2) and 52(3). See also ss 56 and 57.
- 81 Sections 58(1)(a)-(b). Subsections (2) and (3) explain subs (1). Subsection (4) notes, without limitation to subs (2), that customary marine title does not exist if that title is extinguished as a matter of law.
- 82 Section 59(1). Subsections (2) to (4) clarify various aspects of subs (1).
- 83 See *Re Edwards (Te Whakatohea (No 2))* [2021] NZHC 1025 at [99]; *Re Tipene* [2016] NZHC 3199.
- 84 Marine and Coastal Area (Takutai Moana) Act 2011, s 60(2)(a).
- 85 There are exceptions for "accommodated activities" – essential things like infrastructure.
- 86 Marine and Coastal Area (Takutai Moana) Act 2011, s 68.
- 87 Bevan Marten "Limitation of Liability in Maritime Law and Vessel Source Pollution: A New Zealand Perspective" (2013) 2 NZ Law Rev 199 at 205.
- 88 The United Nations specialised agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships.
- 89 It is a common feature of maritime legislation in many jurisdictions that it either enacts, or is based on, international conventions entered into by sovereign states with the aim of regulating shipping and trading activities and maritime matters worldwide. As a consolidating statute, the Maritime Transport Act 1994 replaced the Shipping and Seamen Act 1952 which was modelled on the United Kingdom Merchant Shipping Acts. See Paul David and Felicity Monterio "Maritime Law and Admiralty Law" in *Laws of New Zealand* (LexisNexis, online ed, 2020) at [2] and [4].
- 90 Maritime Transport Act 1994, long title.
- 91 Bevan Marten *Maritime Law in New Zealand* (Thomson Reuters, 2016) at 68.
- 92 See Maritime Transport Act 1994, ss 5(a), 5A(a), 17(3), 19(1), 21(1), 32, 33, 39, 392(a)(ii), 430 and 431(1).
- 93 See long title (f) and (g), ss 5(a), 5A(b) and (d), 392(a)(i), 430 and 431(1).
- 94 See long title (b), (g) and (i), ss 5(b), 5A(c), 39(1), 392(b) and 431(1).
- 95 Sections 22-29, 39, 54 and 415.
- 96 Parts 1-17 and 28-31.
- 97 Parts 18-27.
- 98 Long title (f).
- 99 Maritime Transport Act 1994, ss 5 and 5A. The Transport Law Bill introduced in 1993 was later divided into separate land, air and sea components, with the Maritime Transport Act modelled on the Civil Aviation Act 1990; see Bevan Marten *Maritime Law in New Zealand* (Thomson Reuters, 2016) at 12.
- 100 Maritime Transport Act 1994, pt 29.
- 101 Section 2(1). There are eight maritime zones referred to in the Maritime Transport Act, and New Zealand is notable when compared to other countries in that "maritime" does not refer to the sea alone. See Bevan Marten *Maritime Law in New Zealand* (Thomson Reuters, 2016) at 74.
- 102 It can range from conservation of natural heritage or built heritage, the preservation of wilderness values, the safeguarding of biodiversity, the protection and management of public lands for various purposes, the safeguarding of threatened species and so on.
- 103 The Conservation Act deals with the management of sport and game fisheries, whereas fisheries at sea are not treated as a "conservation" issue.
- 104 Such as Alberta's Oil and Gas Conservation Act.
- 105 Conservation is a fuzzy term, and is often used to denote more active management and stricter protection of species, areas and historic or built features than weaker "sustainability", which also applies to activities that can threaten species, heritage and protected areas. But other "forms" of conservation exist: for example, soil "conservation" is about making sure that soils do not disappear through erosion or degradation, while resource "conservation" more generally is about making sure we do not "waste" natural resources.
- 106 That is not to presuppose that such statutes, and the tools under them, should necessarily *continue* to be the responsibility of the Department, or that other tools not currently administered by the Department should remain that way. See Conservation Act 1987, schedule 1, for enactments administered by the Department of Conservation.
- 107 That is not to say species legislation cannot impose restrictions in particular places, only that the focus of management is on the value of a species rather than the value of a particular place. For example, marine mammal sanctuaries can be imposed under the Marine Mammals Protection Act, but these are focused on the value of marine mammals who rely on the area, rather than the value of the area itself.
- 108 For example, through a common architecture comprised of general statements of policy, conservation management strategies, conservation management plans and concessions.
- 109 Marine Reserves Act 1971, long title.
- 110 Marine Reserves Act 1971, s 3(2)(d)).
- 111 Department of Conservation "Marine Reserves A-Z" <www.doc.govt.nz/marinereserves>. On Fiordland marine reserves, see the Fiordland (Te Moana o Atawhenua) Marine Management Act and discussion below.
- 112 For a recent overview of conservation law in New Zealand, including the Wildlife Act, see Deidre Koolen-Bourke and Raewyn Peart *Conserving Nature: Conservation Reform Issues Paper* (Environmental Defence Society, July 2021), ch seven.
- 113 Wildlife Act 1953, s 3. Exceptions to this rule are provided in ss 4 and 5 and schedules 1 – 5.
- 114 An animal means "any mammal (not being a domestic animal or a rabbit or a hare or a seal or other marine mammal), any bird (not being a domestic bird), any reptile, or any amphibian" (Wildlife Act 1953, s 2).
- 115 Wildlife Act 1953, s 68B(4)(b).
- 116 Marine mammals are excluded from the definition of "animal" under the Wildlife Act.
- 117 Department of Conservation "Te Pēwhairangi (Bay of Islands) marine mammal sanctuary proposal" <www.doc.govt.nz/get-involved/have-your-say/all-consultations/2021-consultations/te-pewhairangi-bay-of-islands-marine-mammal-sanctuary-proposal/#summary>.
- 118 For example, the Marine Reserves Act.
- 119 See Kate Mulcahy, Raewyn Peart and Abbie Bull *Safeguarding Our Oceans: Strengthening marine protection in New Zealand* (Environmental Defence Society, 2012), ch 16.
- 120 See Fiordland (Te Moana o Atawhenua) Marine Management Act 2005, pt 3 and sch 12.
- 121 Kaikōura (Te Tai o Marokura) Marine Management Act 2014, s 3.
- 122 Part 2.
- 123 Section 6.
- 124 Hauraki Gulf Marine Park Act 2000, s 33.
- 125 See Hauraki Gulf Forum *State of our Gulf 2020* (State of the Environment Report 2020, February 2020).
- 126 Sugar Loaf Islands Marine Protected Area Act 1991.
- 127 Section 3.
- 128 Marine Reserves Act 1971, long title; Sugar Loaf Islands Marine Protected Area Act 1991, ss 5 and 6.
- 129 See Marine Reserve (Tapuae) Order 2008.
- 130 See Subantarctic Islands Marine Reserves Act 2014, ss 5-8 and schedules 1-3.
- 131 See Department of Conservation, Subantarctic Islands, at <www.doc.govt.nz>.
- 132 Biosecurity Act 1993, ss 68-78.
- 133 Sections 88-89.
- 134 National Policy Direction for Pest Management 2015; Biosecurity Act 1993, ss 56-58.
- 135 Much of what is now in the EEZ Act framework was also contained within regulations made under the Maritime Transport Act 1994, in recognising that many environmental risks and human activities have traditionally been associated with ships.
- 136 That said, there are several provisions in the Continental Shelf Act that go beyond just mineral exploitation.
- 137 Crown Minerals Act 1991, s 1A.
- 138 Crown minerals will often exist under private land.
- 139 See New Zealand Petroleum & Minerals <nzpam.govt.nz>.
- 140 Crown Minerals Act 1991, pts 1A, 1B.
- 141 See Crown Minerals Amendment Act 2019.
- 142 Access arrangements include access to conservation land, and relevant decision-making criteria are in the Crown Minerals Act rather than the Conservation Act (unlike all other activities on conservation land). See Crown Minerals Act 1991, s 61.
- 143 Department of Conservation *2013 Code of Conduct for Minimising Acoustic Disturbance to Marine Mammals from Seismic Surveys Operations* (November 2013).
- 144 Climate Change Response Act 2002, s 3.
- 145 Climate Change Commission *Ināia tonu nei: a low emissions future for Aotearoa* (31 May 2021).
- 146 At 53.
- 147 Resource Management Act 1991, ss 70A, 70B, 104E and 104F.
- 148 On the climate implications of trawling, see Steve Ulrich "Doing nothing in our oceans is a major way to do something about climate change" (16 August 2021) <www.stuff.co.nz/environment/climate-news/126086460/>

- doing-nothing-in-our-oceans-is-a-major-way-to-do-something-about-climate-change>
- 149 Resource Management Act 1991, pt 8.
- 150 Historic places are divided into Category 1 (places of special or outstanding historical or cultural heritage significance or value) and Category 2 (places of historical or cultural heritage significance or value).
- 151 Gerard Hutching "Shipwrecks" (12 June 2006) *Te Ara - the Encyclopedia of New Zealand*, <<http://www.TeAra.govt.nz/en/shipwrecks>>.
- 152 Heritage New Zealand Pouhere Taonga Act 2014, ss 42-64.
- 153 With one minor exception in relation to the Cook Strait protected area.
- 154 As opposed to "wasting" a valuable resource or inefficient use.
- 155 Marine Transport Act 1995, pts 19 and 19A.
- 156 Waste Minimisation Act 2008.
- 157 Part 2.
- 158 Section 11.
- 159 Waste Minimisation (Plastic Shopping Bags) Regulations 2018; Ministry for the Environment "Phasing out hard-to-recycle and single-use plastics" (June 2021) <www.environment.govt.nz>.
- 160 Waste Minimisation (Microbeads) Regulations 2017.
- 161 Ministry for the Environment "Container return scheme: An option for reducing litter and waste to landfill" (April 2020) <www.environment.govt.nz>.
- 162 Waste Minimisation Act 2008, pt 3; Ministry for the Environment "Waste disposal levy expansion" <www.environment.govt.nz>.
- 163 Part 7.
- 164 Litter Act 1979, ss 5-8 and 9-12.
- 165 Hazardous Substances and New Organisms Act 1996, pt 5.
- 166 Sections 34-45B.
- 167 See Michael Neilson "Why Auckland's beaches are unswimmable every time it rains, and what's being done to turn it around" www.nzherald.co.nz (9 January 2021).
- 168 Greg Severinsen *Reform of the Resource Management System: The Urban Context* (Environmental Defence Society, July 2020).
- 169 Unless the sea becomes land by virtue of reclamation.
- 170 Territorial Sea, Contiguous Zone, and Exclusive Economic Zone Act 1977.
- 171 Section 10.
- 172 Section 8.
- 173 Environment Act 1986.
- 174 Conservation Act 1987, s 5; Resource Management Act 1991, pt 11.
- 175 Environment Act 1986, ss 4 and 28.
- 176 Environment Act 1986, long title.
- 177 Section 16.
- 178 Parliamentary Commissioner for the Environment *Managing our estuaries* (August 2020).
- 179 For example, see Resource Management Act 1991, s 42C.
- 180 Environmental Reporting Act 2015, pt 2.

APPENDIX 3

THE POTENTIAL FOR THE PROPOSED STRATEGIC PLANNING ACT TO BE USED AS A VEHICLE FOR MARINE SPATIAL PLANNING

In Chapter 6 of the working paper we explore the possibility of using the proposed Strategic Planning Act (designed for spatial planning on land) as a vehicle to conduct marine spatial planning as well. This legislation has been signalled by the government, but no indicative drafting has been released. Below, we look at what the Randerson Panel proposed for this statute, and consider its appropriateness in the marine context in more depth.

The proposed Strategic Planning Act

The Randerson Panel recommended a new Strategic Planning Act as part of reforms to the resource management system. That is now being progressed through more detailed policy development by the government, with a draft bill expected by the end of 2021. Although it was recommended that this only interface with the RMA, Local Government Act, Land Transport Management Act and Climate Change Response Act (due to the limitations of the Panel's terms of reference), there would be opportunity through further oceans reform to extend its ambit to additional marine legislation including the Fisheries Act, EEZ Act and conservation legislation (including potential marine protected areas legislation).

The Randerson Panel proposed a new Strategic Planning Act "as the key mechanism for improving strategic integration across the resource management system".¹ It is to be designed to help improve strategic integration at a regional level across multiple statutes, functions, outcomes and agencies.²

The Strategic Planning Act would require spatial strategies to be developed for each region, and they would encompass land, freshwater and the coastal marine area, but not the EEZ. They are to provide a long-term view, setting a strategic direction for at least the next 30 years and cover a wide range of matters including:³

long-term objectives and strategies to improve the quality of the natural and built environments, provide sufficient development capacity, promote Māori interests and values, promote the sustainable use of rural land, protect historic heritage, address natural hazards and climate change.

The regional spatial strategies are to be developed jointly by central government, local government and mana whenua through consensus decision-making. This, importantly, enables mana whenua to participate

in spatial planning as partners and "to better reflect Te Tiriti partnerships and incorporate mātauranga Māori knowledge".⁴ It should enable Māori values associated with the coastal marine area to be more fully reflected in the planning documents.

The Panel proposes that regional spatial strategies would include a range of environmental matters (alongside identifying the location of future development capacity and infrastructure) such as "regionally significant ecological areas, landscapes and recreational space that should be protected or enhanced", "areas of historic heritage values and areas of significance to mana whenua that should be protected and enhanced", "areas where significant change in land use is required to reduce impacts of land use and development in lakes, rivers, wetlands and the marine environment", "areas for enhancement and restoration, such as wetlands and green corridors" and "areas that may be affected by climate change or other natural hazards, and measures that might be necessary to address such issues".⁵

Under the proposed Strategic Planning Act, regional spatial strategies would have the ability to address a range of environmental matters at the regional level, including land-based impacts on the marine area (eg where urban expansion can go) and use of the coastal marine area itself (where different marine activities are appropriate). However, it is clear the framing has been driven primarily by a terrestrial focus, particularly as one of the driving issues underpinning the proposal to develop the new Act is the better management of urban issues and housing supply and affordability.

The Panel also recommended that central government should have the ability to develop a "national priorities statement" under the Strategic Planning Act which would "signal its intention to address specific nationally significant issues through regional processes".⁶ This would be used to set out "particular nationally significant issues central government wishes to resolve at a regional level" amongst other things.⁷ This national priorities statement could be a mechanism through which central government sets out its long-term national priorities for the coastal marine area (beyond the effects-based and largely reactive focus of the NZCPS), and this could form an important part of a national oceans policy.⁸ It could serve to set out priorities for spatially planning the marine area in a similar manner to the approach taken in the United Kingdom, where provision is made in the legislation for the preparation of a marine policy statement, and in Victoria which has a Marine and Coastal Policy.

It could even be framed more broadly as a formal vision for the future of Aotearoa New Zealand, combining te ao Māori and Western perspectives, addressing big picture elements of the Treaty relationship, and form something of a resource management constitution. We have, for example, previously suggested that a broader national Futures Strategy would be a better framing for such a tool.⁹

Regional spatial strategies, according to the Panel, would be accompanied by “implementation agreements” which include more detailed planning for “certain infrastructure or environmental remediation projects” and apportion funding responsibility between central and local government. These could then be linked to the budgeting process for each government body, thereby helping to ensure that funding is made available to implement the regional spatial strategies for non-regulatory actions. Such implementation agreements would serve as a useful implementation tool for proactive actions identified for the marine area, such as coastal restoration initiatives.

The Panel’s recommendations also address the potential linkage between regional spatial strategies and other resource management legislation through which the provisions of the spatial strategies would primarily be implemented. The Panel proposed that regional spatial strategies should be “consistent with” the purposes of the new NBA, Local Government Act and Land Transport Management Act. It also proposed that they be consistent with national direction including NPSs, NESs, the national adaptation plan under the Climate Change Response Act, and government policy statements on land transport and housing and urban development. This means that the NZCPS will play an enlarged, and very important, role within the system in that big picture spatial planning will need to be consistent with it.

In turn, plans developed under the NBA, the Local Government Act and the Land Transport Management Act would need to be consistent with a regional spatial strategy.¹⁰ This should help ensure that alignment runs both ways. Such plans include long-term plans and annual plans which incorporate local government budgets, and this could help to ensure that local government expenditure is aligned with the regional spatial strategy’s provisions on the coastal marine area.

On the face of it, the proposed Strategic Planning Act presents an intriguing opportunity to progress a framework for formal marine spatial planning. That is particularly the case because it allows integrated consideration of how land development and catchment management impact the marine area over time, and provides for the development of plans which can set out how to change land use, fund restoration initiatives, and potentially create coastal protected areas under conservation legislation (eg reserves and covenants) to address those impacts. As we have emphasised in our conservation system reform work:¹¹

Private land uses, pollutants and downstream effects have a significant impact on the country’s biodiversity. In recent years, agricultural intensification (especially conversion from sheep to dairy farming), subdivision

and urban sprawl have all contributed to increasing pressures on already at risk and highly vulnerable species... we need to connect the dots between the management of private land and the broader conservation management system.

That is true of marine species, too. However, the proposals for the new Act have not been driven by marine concerns, and therefore have some drawbacks. For one, while the Act’s aim of integrated management is compatible with that for marine spatial planning (which is primarily to integrate management across a particular marine area), if it was to provide a framework for an oceans policy, the Act’s scope would need to be much broader. For a start it would need to apply to the EEZ (as well as the coastal marine area), given that is where the bulk of the country’s marine jurisdiction is located. And while a general purpose is compatible, the focus of integration on land (connecting land use and infrastructure) is quite different to the approach needed for the marine space, which is much more focused on ecosystem-based management. The context of property rights is quite different too, as is the conservation context; on land, area-based conservation is largely focused on managing the existing conservation estate and its connections to private land, whereas in the sea the imperative is to create *new* protected areas in a domain which has many existing uses but less well-defined property rights.¹²

The new Strategic Planning Act envisaged by the Randerson Panel provides one option for progressing marine spatial planning. However, spatial plans under the proposed Act would not extend out to the EEZ, which comprises the bulk of the country’s marine area. This is a significant shortcoming.

The Strategic Planning Act would also need to interface with a much broader suite of legislation including the EEZ Act, the Fisheries Act, the Maritime Transport Act and the Biosecurity Act, as well as conservation legislation like the Marine Reserves Act (or new marine protected areas legislation), Marine Mammals Protection Act and Wildlife Act. If it did not, the risk is that it will further fragment and complicate the system within the coastal marine area, because it would essentially only apply to one regime – the new NBA.

A spotlight on the potential relationship between marine spatial plans and the EEZ Act

The Strategic Planning Act could be expanded so that spatial plans created under it could extend into the EEZ. This would necessitate some kind of relationship between the Strategic Planning Act and the EEZ Act. For example, provisions of the marine spatial plan could be given direct effect through a number of mechanisms:

- The relevant part of the plan could become an EEZ policy statement (under subpart 2 of the EEZ Act) or amend or be added to an existing EEZ policy statement in the event that one is

prepared. This in turn would affect decision-making on consents through a requirement for decision-makers to "have regard to" it.¹³ However, this is quite a weak relationship because it means that the EEZ policy statement can be overridden by other considerations in consenting.

- The marine spatial plan could be prescribed more directly as a matter to be taken into account in decisions on marine consents under section 59(2) of the EEZ Act.
- The marine spatial plan could recommend to the Minister the making of regulations, particularly under section 28 of the EEZ Act which enables the identification of specific areas and the closure of them to specific activities, and/or under section 29 which enables activities to be prescribed as permitted, discretionary or prohibited.
- A spatial plan could have the ability to directly insert or create regulatory provisions under the EEZ Act. However, this begs the question as to why such things would not be done under the EEZ Act itself (eg if setting limits became mandatory under that Act), or whether we should dispense with an additional layer of strategic planning and simply cut to the chase through a single, more integrated, Oceans Act that subsumed existing legislation.

The scope of the Strategic Planning Act could be expanded so that it had legal influence over decisions made under the EEZ Act as well as the RMA. That could happen in a variety of ways. However, that would create further complexity in a system arguably requiring simplification and rationalisation.

Creating such relationships across many marine statutes is probably a big ask for legislation like the Strategic Planning Act, which is primarily designed to interface with the terrestrial resource management system and associated freshwater and marine systems. This indicates that a different piece of legislation – or at least a version of the Strategic Planning Act that is thoroughly reworked – may be needed to house something like a national oceans policy alongside land-focused instruments. Moreover,¹⁴ a different process for marine spatial planning may be needed to that proposed under the Act, not least because of the presence of a different range of stakeholders (including within government, such as Maritime New Zealand and Fisheries NZ).¹⁵

The need to interface with a broader range of marine legislation raises some difficult questions about an expanded Strategic Planning Act. In particular, what should the direction of influence be? The Panel has envisaged that national direction – a National Planning Framework – will effectively drive decision-making under

spatial plans. The direction of influence will be bottom-up. Where would that leave, for example, centralised decision making under the Fisheries Act? Should marine spatial plans have to be consistent with decisions taken under that Act (including where decisions have consciously been taken *not* to do things), or should the Fisheries Act instead be seen as a toolkit to be deployed in the service of a spatial plan that is more strategic or ambitious? Would that be different if there were a requirement (see Chapter 5) to deploy a fisheries strategy and area-based fisheries plans?

The Sea Change – Tai Timu Tai Pari spatial planning process essentially conceived of the direction of influence as being top-down (it would influence how other frameworks were used), and this is the way it is being implemented in practice.¹⁶ However, the risk of this direction of influence is that a more collaborative or even negotiated style of planning under the Strategic Planning Act, together with a broader purpose, might enable more specific measures under other marine legislation (including conservation laws or new strategic marine protected area legislation) to be undermined. That is one of the concerns on land, where the relationship between environmental limits set under the NBA and broader spatial plans under the Strategic Planning Act needs careful attention.

The scope of the Strategic Planning Act could also be expanded so it had legal influence over decisions made under the Fisheries Act. However, it is not clear what the direction of influence should be here.

Spatial plans under the Strategic Planning Act may also become so broad, and the issues they need to deal with (on land and sea, urban and rural etc) so extensive that they become too complex and too difficult to develop within any meaningful timeframe. The danger is that they then become so high level that their usefulness is diminished. For example, would decision-makers contemplate delaying the production of a regional spatial strategy on land, crucial for coordinating the deployment of infrastructure with the release of land for urban growth, because more time was needed to map habitats out at sea?

The normative basis of marine and land management is also arguably quite different. A prime function of marine spatial planning is to assist with implementing an ecosystem-based management for our marine environment. The goal of ecosystem-based management is to maintain ecosystems in a healthy, productive and resilient condition so they can provide the goods and services humans want and need.¹⁷ In addition, key functions that a framework for marine spatial planning needs to perform are the protection and restoration of the marine environment and providing for the setting of environmental bottom lines (or at least translating those into spatial terms, such as protected areas). In contrast, terrestrial spatial planning, as proposed in the Strategic Planning Act, is more focused on the need to align decision-making under legislation that has spatial

components, such as land use planning and infrastructure funding decisions. In this sense, the role of spatial planning on land may be weighted more towards its integrative role than towards its role in achieving healthy and productive ecosystems and other environmental outcomes (although this will still be a relevant role).

The complex and interconnected nature of the marine environment also requires consideration in designing spatial planning legislation. In terrestrial spatial planning we have a better understanding of where the boundaries of activities start and stop, and of the scale at which their impacts may occur. Marine environments do not react to development pressures based on the traditional notions of 'sites' and 'boundaries'. Understanding impacts in marine environments requires spatial planning approaches that consider chains of causation and an understanding of the complexity and fluidity of marine environments.¹⁸ These differences are likely to require different approaches to the design of spatial planning processes on land and in the ocean. This does not necessarily mean that the two approaches could not be accommodated within one piece of legislation (it could contain two parts), or that they could not progress in tandem. Separate processes could also be connected better by having a strong role for an Oceans Agency or Commission in inputting into land based spatial plans.

The Randerson Panel does propose that regional spatial strategies would include a range of environmental matters

(alongside identifying the location of future development capacity and infrastructure), as described in the spotlight above.¹⁹ Many of these matters are relevant to the marine area but such a list could be expanded to include things such as areas suitable for marine uses (such as fishing and aquaculture) and marine areas suitable for restoration (including shellfish beds and kelp forests).

The proposed approach of a joint government-Māori planning body would help ensure that relationships between mana whenua and the marine environment were better acknowledged and supported, that important values were protected, and also that there is cross-government consistency in approach. However, it may not enable stakeholders to have a hands-on role in the collaborative planning process which can help build trust and reduce conflicts within the marine environment.

The purpose of spatial planning on land and at sea is arguably quite different. Marine spatial planning is more firmly rooted in the concept of ecosystems-based management, whereas terrestrial spatial planning is (at least partly) driven by the need to coordinate land use and public infrastructure funding and supply. That calls into question the appropriateness of undertaking these processes under the same legislative framework, although dual purposes and processes could be provided for.

ENDNOTES

- 1 Resource Management Review Panel *New Directions for Resource Management in New Zealand* (Ministry for the Environment, June 2020), at 129.
- 2 At 129.
- 3 At 142.
- 4 At 146-147.
- 5 At 142-143.
- 6 At 138.
- 7 At 138.
- 8 At 138.
- 9 Greg Severinsen *Reform of the Resource Management System: A Pathway to Reform. Working Paper 2: A model for the future* (Environmental Defence Society, Auckland, 2019) at 111 and following; Greg Severinsen *Reform of the Resource Management System: A model for the future. Synthesis report* (Environmental Defence Society, Auckland, 2019) at 168 and following.
- 10 Resource Management Review Panel *New Directions for Resource Management in New Zealand* (Ministry for the Environment, June 2020), at 139-140.

- 11 Deidre Koolen-Bourke and Raewyn Peart *Conserving Nature: Conservation System Reform Issues Paper* (Environmental Defence Society, Auckland, 2021) at 125.
- 12 For example, "30 by 30": the goal of 30 per cent of our oceans being spatially protected by 2030.
- 13 Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012, s59(3)(aa).
- 14 This would not be the *only* process possible for marine spatial planning, however.
- 15 Exactly what that process looks like in drafting form remains to be seen.
- 16 See Sea Change Tai Timu Tai Pari *Hauraki Gulf marine spatial plan* (May 2017).
- 17 Charles Ehler and Fanny Douvère *Marine spatial planning: A step-by-step approach toward ecosystem-based management* (UNESCO, Paris, 2009).
- 18 Paolo Gazzola, Maggie Roe and Paul Cowie "Marine spatial planning and terrestrial spatial planning: Reflecting on new agendas" (2015) 33(5) *Environment and Planning C: Government and Policy* 1156.
- 19 Resource Management Review Panel *New Directions for Resource Management in New Zealand* (Ministry for the Environment, June 2020) at 142-143.

APPENDIX 4

INTERNATIONAL APPROACHES TO OCEANS GOVERNANCE AND MANAGEMENT

We have shone spotlights on some international examples of oceans management in other parts of this working paper (for example, in the context of legislative design). However, below we outline more wide-ranging summaries of how other countries are configuring or reforming their systems for marine management, to give a tangible sense of potential ways forward for Aotearoa New Zealand. These are focused primarily on governance and institutional arrangements, although they stray into related matters. We intend to integrate international learnings, where relevant, within our theme-based analyses in our final report.

Victoria, Australia

In 2018, the Australian State of Victoria passed the Marine and Coastal Act. This Act required the development of a new Marine and Coastal Policy. The aim of the policy is to guide planning and management decisions in the marine and coastal environment so that they are consistent with the Act's objectives and principles. It is accompanied by a Marine and Coastal Strategy that assists with the practical implementation of the policy by setting priority actions. Planning tools include the Marine and Coastal Strategy, Regional and Strategic Partnerships, Coastal and Marine Management Plans, Environmental Management Plans and consents. The development of these plans and assessment of consents is guided by the Act's principles and objectives.

The Act has seven guiding principles. These are: integrated coastal zone management; ecosystem-based management; ecologically sustainable development; evidence-based decision making; the precautionary principle; the proportionate and risk-based principle; and adaptive management. The Policy lays out what these principles mean for planning and decision making. There are also nine specific objectives, which are to:

- a. protect and enhance the marine and coastal environment
- b. promote the resilience of marine and coastal ecosystems, communities and assets to climate change
- c. respect natural processes in planning for and managing current and future risks to people and assets from coastal hazards and climate change
- d. acknowledge Traditional Owner groups' knowledge, rights and aspirations for Land and Sea Country

- e. promote a diversity of experience in the marine and coastal environment
- f. promote the ecologically sustainable use and development of the marine and coastal environment and its resources in appropriate areas
- g. improve community, user group and industry stewardship and understanding of the marine and coastal environment
- h. engage with specified Aboriginal parties, the community, user groups and industry in marine and coastal planning, management and protection
- i. build scientific understanding of the marine and coastal environment.

The marine and coastal environment extends five kilometres inland. Additionally, marine and coastal Crown land, which includes all of Victoria's marine waters, bays, inlets, Gippsland Lakes and Crown land 200 metres inland from the high tide mark, is given specific planning measures that require consent for use and development. Victoria's marine jurisdiction reaches out to three nautical miles from the high-water mark, at which point Commonwealth (national) jurisdiction takes over. It applies on land to a depth of 200 metres.

An important feature of the new policy is the inclusion of the Marine Spatial Planning Framework. This framework seeks to integrate and coordinate management and planning of the marine sector. It is not designed to replace or duplicate existing management and planning, rather it provides an overarching framework to encourage consistency. It provides policies to guide integration where a marine spatial plan is not yet developed and policies to guide the development of a plan.

The Department of Environment, Land, Water and Planning is currently in the process of producing practical Marine Spatial Planning Guidelines. Marine spatial planning is to bring together information about spaces designated for activities including fishing, maritime transportation, oil and gas development, aquaculture and conservation. This is to help proactively identify and reduce potential conflicts between uses, and between uses and policies and objectives. Overall, the Marine Spatial Planning Framework guides long-term planning, management and decision-making by multiple marine sectors.

There are specific policies designed to recognise Traditional Ownership by indigenous groups. These include embedding Traditional Owner aspirations into decision making, planning and management, for example, through recognising, referencing and giving effect to the priorities, aims and aspirations of applicable Joint Management Plans and Country plans. The policies also encourage partnership, involvement of Traditional Owners in management, and capacity-building.

The Act establishes a Marine and Coastal Council to assist the Minister. This is to be made up of seven to nine members, although the Council may also appoint committees to assist with its work. In preparing a Marine and Coastal Policy or Strategy, the Minister is required to consult with the Council. The Minister is also required to consult with the responsible Ministers of applicable Acts, municipal councils, specified Aboriginal parties and public authorities if those persons or bodies will have their interests affected by the policy.

The Minister must consider public submissions on the Policy and the Strategy. Furthermore, the Ministers of applicable Acts and any other Minister whose interests may be affected by the Policy or Strategy must agree to the contents of the Policy or Strategy or to any amendment. This consultation process is broadly similar to that required for other planning tools or decisions made under the Act and facilitates coordination.

There has been some criticism from the Victorian National Parks Association and the Australian Greens Victoria that these reforms do not go far enough. They argue greater marine conservation is necessary, including reform of fisheries and an increase in marine protected areas.¹ Additionally, they are critical of the advisory role of the Marine and Coastal Council. Because the Strategy is written by the Department of Environment, Land, Water and Planning, the Greens have concerns that the Council will end up “toothless and ineffective”.² However, it is too early to tell whether this will prove true.

Queensland, Australia: The Great Barrier Reef

The management of the Great Barrier Reef off the Queensland coast is largely regulated by the Great Barrier Reef Marine Park Act 1975. The main object of the Act is to “provide for the long-term protection and conservation of the environment, biodiversity and heritage values of the Great Barrier Reef Region”.³ Supplementary objects are to allow ecologically sustainable use; encourage engagement in protection and management by interested persons and groups; and assist in meeting Australia’s international environmental and heritage obligations.⁴

The Act created the Great Barrier Reef Marine Park Authority, which is part of Australian Government jurisdiction.⁵ The Authority is responsible for the management of the Marine Park. However, the adjacent catchments are under the Queensland State Government’s jurisdiction. This division has made it difficult to undertake integrated ecosystem-based management, particularly regarding land-based impacts.⁶ The Queensland State Government is also responsible for on the ground, day-to-day management of the Marine Park, which includes enforcement, surveillance, monitoring and education.⁷ It does this within programmes and guidelines set out by the Authority.⁸

Management tools for the Marine Park include zoning plans, permits and management plans. The Authority must prepare zoning plans for the park. The first zoning plan was completed in 1981.⁹ The plan explains what activities are allowed in what areas and whether a permit is required. Specific objectives explain the purpose of each zone.¹⁰ Interestingly, traditional hunting, fishing and collecting is prohibited for “preservation zones”.¹¹ While the locations of preservation zones are usually small or remote, this is a restriction on indigenous rights and interests.¹² On the other hand, the Authority empowered indigenous groups to develop and implement Traditional Use of Marine Resources Agreements that it accredits.¹³

Overall, the Authority has struggled to manage the diverse pressures on the reef system. There is a lack of integrated management between the Marine Park and its adjacent Queensland state waters and coast. There has been significant coral cover decline, a measure of the health of the coral reef which is linked to land-based runoff, climate change, coral diseases and ocean acidification,¹⁴ pressures on the reef system which very likely interact with one another and lack integrated management.¹⁵

For example, exclusion areas for the Marine Park are situated around major ports and urban areas.¹⁶ This allowed for Queensland Government-owned port authorities to engage in major port developments and dredging activities, which the Authority chairman labelled as an “unacceptable risk”.¹⁷

Water quality has also been a challenge for integrated management. Several initiatives, including the Reef Water Quality Protection Plan which focussed on controlling agricultural runoff, were launched to address this stressor.¹⁸ Agricultural nutrient runoff has been linked to increased population outbreaks of crown of thorns starfish which severely reduce coral cover.¹⁹ However, no direct management response for the starfish was developed until 2020.²⁰ While the management plans for crown of thorns starfish and nutrient runoff briefly mention the connection

between them, the management response is not integrated.²¹ For example, it does not appear that targets for nutrient runoff are linked to a starfish reduction threshold. These stressors will likely be exacerbated by climate change. Modelling shows that even with substantial progress under the Plan (to improve water quality), if no action on climate change is taken, the coral cover is likely to fall to five percent.²²

Despite sometimes being held up as one of the best examples of ecosystem-based management, the Great Barrier Reef management system has mixed success.²³ It has struggled to deal with multiple interrelated stressors, especially relating to land/ocean integration.

United Kingdom

The United Kingdom has a relatively centralised approach to oceans management. The large majority of ocean-related activities are under national jurisdiction, with local governments' land use powers extending to the low water mark only. The Marine and Coastal Access Act 2009 creates an integrated system for marine planning, marine licensing and the establishment of marine conservation zones.²⁴ The Act also provides for the development of a Marine Policy Statement which guides decision-making in the marine area towards sustainable development.²⁵

Additionally, the Act established the Marine Management Organisation.²⁶ The Organisation is an executive non-departmental body. Its board of nine members is appointed by the Minister, but the organisation itself functions at arm's length from the government. Its role is to bring together key marine decision-making powers and delivery mechanisms into a centralised body with marine management expertise. It is responsible for implementing the marine planning system and the marine licensing regime. It also manages fishing fleet capacity, fisheries quota and marine protected areas. Furthermore, it operates as a knowledge hub for marine information to support decision-making processes.

The United Kingdom system has an independent Science Advisory Panel that provides advice to the Chief Scientific Adviser and ministers. It also helps guide the priorities and planning of the Department of the Environment, Food and Rural Affairs for both the long-term and immediate risks and opportunities. The Department has responsibility for general environmental management and funds the Marine Management Organisation to focus on marine management.

Despite considerable centralisation, elements of the system allow for devolution. The Act has established 10 inshore fisheries authorities which manage fishing

activity within their districts as well as marine protection (under the oversight of the Marine Management Organisation), balancing the social and economic benefits of exploiting resources with the need to protect the marine environment. The authorities also participate in marine spatial planning processes.²⁷

For example, the Sussex Inshore Fisheries and Conservation Authority was established in 2010 under the Sussex Inshore Fisheries and Conservation Order 2010. Its membership consists of a mix of elected councillors, sectoral interests and representatives of the relevant government agencies. It is responsible for the Sussex inshore fisheries district, which covers the combined areas of the West Sussex County Council, East Sussex County Council and Brighton Hove City Council and the adjacent area of sea out to six nautical miles (where over 300 fishing boats operate). The Authority has designated marine conservation zones and is also responsible for developing fisheries bylaws. The Authority employs 10 full-time and two part-time staff members and draws on a number of student placements and volunteers. It is funded by a mandatory levy on member councils. It is an interesting example of a devolved institution that has responsibility for fisheries and conservation decisions under the oversight of a national body.

Canada

Like the United Kingdom, Canada has adopted a reasonably centralised approach. However, instead of creating a new marine management body, the existing Department of Fisheries and Oceans was made the "lead agency" for oceans. As a federal system, provinces and territories have responsibility over land, shoreline and specific seabed areas, and municipalities manage land uses affecting the marine environment such as sewage and waste disposal. The Oceans Act 1996 sets out key principles such as sustainable development, integrated management and the precautionary approach.²⁸ These principles guide a National Oceans Strategy and decision-making.

Canada's marine management system takes an "overlay" approach, rather than centralising authority into one body. For example, federal, provincial, and territorial ministers with marine management responsibilities meet as part of the Canadian Council of Fisheries and Aquaculture Ministers to facilitate collaboration. Collaboration is also written into the legislation, as the Minister must work with federal colleagues, provincial and territorial governments, affected aboriginal organisations, coastal communities, and other persons, including those bodies established under land claims agreements when developing the Oceans Strategy.²⁹ The Oceans

Act does not duplicate or supersede existing legislation and policy. Instead, it provides a framework to interpret existing policies within a modern context.³⁰

The Oceans Act is enabling legislation in that it authorises the Department of Fisheries and Oceans to use a wide range of tools to achieve integrated management. These tools include integrated management plans; marine protected areas and associated enforcement regulations; marine environmental quality guidelines, objectives, and standards, and the power to prescribe these through regulation; and the establishment of subnational and local bodies.

It also strengthened the Department of Fisheries and Oceans through a merger with the Canadian Coast Guard.³¹ The Coast Guard carried out many of the shipping and marine pollution functions that in Aotearoa New Zealand are undertaken by Maritime New Zealand. This brought together fisheries, aquaculture and shipping functions, but left a range of other marine activities, such as oil, gas and minerals exploitation and marine energy generation, with other agencies. The Oceans Act was intended to centre principal responsibility for oceans management in the Department of Fisheries and Oceans which was to be the overall steward of the system. However, in practice, the role has been one of a co-ordinator rather than supervisor of other Canadian agencies, and oceans management has remained fragmented.³²

Furthermore, a 2011 review identified inadequate governance arrangements as being one of the main impediments to the successful implementation of Canada's Oceans Act. Specific problems identified included the absence of requirements for the Minister to actually do anything – in other words, a weak mandate – combined with a lack of timeframes for the achievement of goals around marine protected areas and management plans.³³

The Australian Commonwealth: Non-statutory attempts at integration

Australia attempted to establish a centralised system for oceans management, although its approach had no legislative basis. In 1998, the Commonwealth Government released an ocean policy which identified the main policy tool as being regional marine planning. Several institutions were set up to implement the policy and produce regional marine plans. The National Oceans Office was responsible for the policy's implementation. The National Oceans Ministerial Board of Commonwealth Ministers brought together responsible ministers to oversee and approve marine plans and coordinate cross-sectoral issues. The Oceans Board of Management, made up of the heads of relevant departments, dealt with operational issues. The National Oceans Office was an independent

executive agency, similar to the Marine Management Organisation in the United Kingdom, which prepared marine plans. However, as a non-statutory body it did not have the same powers. Additionally, the Australian system had an Oceans Policy Science Advisory Group, established in 2003.

Like Canada, Australia faces the difficulty of a federal system. State governments did not all accept the policy. This is a significant issue, as State governments have jurisdiction over the coastal area out to three nautical miles. There is therefore limited jurisdictional integration in a vertical sense.³⁴ After a "silent demise", the policy is now defunct.³⁵ The institutions mentioned above are no longer in existence.³⁶

Development of an oceans framework in Aotearoa Zealand will need to make sure stakeholders are adequately involved in legislative and policy development to avoid the failures of the Australian system. Like Australian states, local governments in New Zealand have significant coastal and marine responsibilities. Cooperation and co-development will be important if these responsibilities are to remain at a regional level.

This could, on the one hand, look like the Canadian model. Overarching principles could be written into an Oceans Act, with a strategy produced to help interpret existing legislation and guide decision-making. Earlier, we highlighted the possibility of using the current resource management reforms to progress this through the Strategic Planning Act.

However, as mentioned earlier, there has been some criticism that the Canadian model has led to increasingly fragmented governance, with the Department of Fisheries and Oceans struggling to perform its lead agency function.³⁷ A United Kingdom centralisation approach could be taken instead, with the creation of a new body that takes over marine functions from existing departments. However, a 2020 review found that while existing land-based licencing and consenting bodies had a strict culture of adhering to policy in the United Kingdom, the new body approached consistency with plans as a "check-box" factor or merely one factor to take into account.³⁸

British Columbia and indigenous ocean management

In British Columbia, indigenous peoples have a strong and ongoing involvement in marine governance.³⁹ The Constitution Act 1982 recognises Aboriginal rights and title, including the right to self-government.⁴⁰ British Columbia recognises these rights in its policy documents.⁴¹ Indigenous nations' resource management jurisdiction over their territories is recognised and treated as another layer of governance.⁴² Indigenous nations in British Columbia

have been at the forefront of protecting marine areas, with nations designating protections under Indigenous law.⁴³ Some of these areas were subsequently made subject to federal or provincial protections.⁴⁴ Additionally, new protected areas designations have been designed to facilitate cooperative governance of marine protected areas.⁴⁵

“Conservancies” are one way that Indigenous nations collaborate with the state in ocean management. This protected area designation was created in response to concerns raised by Indigenous nations that existing legislation did not have the tools available to simultaneously conserve *and* allow for Indigenous social, ceremonial and cultural uses.⁴⁶ Conservancies provide ecological protection while ensuring Indigenous nations can still exercise their rights.⁴⁷ While legislation does not explicitly provide for collaboration, there is a norm of selecting conservancies based on a collaborative process between the province and individual Indigenous nations.⁴⁸ Similarly, the parties work together to develop a management plan for the conservancy.⁴⁹ There are now 63 coastal and marine area conservancies in British Columbia.⁵⁰

The Hakai Lúxvbálís Conservancy is the largest marine protected area in the province.⁵¹ The Haítzaqv (Heiltsuk) Nation and the Province of British Columbia have agreed to cooperatively manage the Conservancy.⁵² The agreement sets out conservation and recreation objectives while providing for the Haítzaqv (Heiltsuk) Nation to access and use land and resources in accordance with their Aboriginal rights.⁵³ Additionally, as the southern part of the conservancy also falls within the traditional territories of the Wuikinuxv Nation, both nations are working with British Columbia Parks to develop a management plan for this area.⁵⁴

A developing area of law in British Columbia is Indigenous Protected Areas. These are defined as “lands and waters where Indigenous governments have the primary role in protecting and conserving ecosystems through Indigenous laws, governance and knowledge systems.”⁵⁵ There can be a spectrum of management objectives and governance frameworks.⁵⁶ However, the main three elements are that these areas are Indigenous-led, represent a long-term commitment to conservation, and elevate Indigenous rights and responsibilities.⁵⁷ In 2018, the National Advisory Panel on Marine Protected Areas Standards recommended that the Minister of Fisheries and Oceans create legislation to recognise, accommodate and support implementation of Indigenous Protected Areas.⁵⁸ While this recommendation was not adopted, Indigenous Protected Areas have been adopted under Indigenous laws.⁵⁹

There are many similarities between British Columbia and New Zealand which make it a useful case study

for thinking about Indigenous management of oceans. Section 35 of Canada’s Constitution Act provides a similar basis for collaboration and self-governance as te Tiriti o Waitangi. Indigenous peoples have distinct tribal identities and overlapping territories. Indigenous nations in British Columbia have their own set of laws and traditions which they exercise parallel to state governance.

An example of this parallel governance occurring in New Zealand is rāhui, or temporary prohibition. In 2021, Ngāti Pāoa laid a rāhui on the waters surrounding Waiheke Island to manage declining biodiversity.⁶⁰ The iwi was seeking to have this rāhui supported by regulation through a temporary closure under the Fisheries Act. Auckland Council and the Waiheke Local Board are supportive of the rāhui (and the temporary closure which would allow the Ministry for Primary Industries to enforce it).⁶¹ This example in many ways reflects the experience of British Columbia, where Indigenous nations are at the forefront of environmental protection and the provincial government may provide parallel protections.

In areas where formalised co-management agreements are absent, this approach recognises the inherent jurisdiction of Indigenous peoples over their territories and provides for “interjurisdictional marine planning processes and marine protection efforts.”⁶² While Canada has more experience with pluralistic governance due to its federal structure, there is no reason why Aotearoa New Zealand cannot further explore interjurisdictional marine management where iwi management under tikanga Māori is complementary to Crown management under state law.⁶³ This has been described as “cooperative federalism” and this is said to support:⁶⁴

interjurisdictional marine planning processes and marine protection efforts. The marine planning process in [British Columbia’s] Northern Shelf Bioregion (which extends from the northern part of Vancouver Island up to Alaska) is a landmark example of cooperative federalism in action, where federal, provincial and Indigenous governments in the area are cooperatively establishing a network of MPAs within the region.

Rhode Island, United States

Rhode Island’s territorial sea is managed by the Coastal Resources Management Council. This 10-member council has broad powers to plan for and regulate activities on the coastline and seaward to three nautical miles.⁶⁵ Its inland jurisdiction is 200 feet from any coastal feature, which begins from the inland border for natural features such as beaches, dunes, coastal wetlands and cliffs.⁶⁶ Additionally, it has jurisdiction over specified activities anywhere in the state if those activities are shown to impact the

coastal environment.⁶⁷ The Council coordinates and consults with other government agencies.⁶⁸ It is supported by staff who are professional engineers, biologists, environmental scientists and marine resources specialists.⁶⁹

The Council's role is "to preserve, protect, develop and where possible restore coastal resources for this and succeeding generations; through comprehensive long-range planning and management designed to produce the maximum benefit for society". The alteration of coastal resources is to be measured, judged and regulated by the primary guiding principle of preservation and restoration of ecological systems.

The primary tool the Council uses to manage ocean resources is spatial planning. The Ocean Special Area Management Plan was developed in response to a desire to efficiently and transparently site offshore renewable energy structures. The Ocean Plan is a spatially detailed map which sets out policies, regulatory standards and performance standards, including requirements for development permits. Additionally, impact assessments for new development are assessed in the context of the Plan, which is intended to increase certainty, efficiency and transparency.⁷⁰

The Ocean Plan covers 3,800km² of marine area, including federal waters. The Council does not have direct jurisdiction over federal waters, but has a federal review function as the Ocean Plan is a part of the state's federally-approved coastal management programme. This ensures that federal action taken in this area is consistent with the policies and regulations of the Plan.

The Ocean Plan document itself is in two volumes.⁷¹ The first volume, totalling over 1,000 pages, includes detailed findings of fact that describe the physical, biological and social aspects of the area.⁷² It also includes specific policies and regulatory standards, which are placed at the end of each chapter. Volume two is an appendix containing the technical reports used to create the plan, totalling almost 3,000 pages. Therefore, the way the plan is constructed integrates the supporting science into the policy document itself, and policies and regulations are presented as conclusions to the analysis presented in each chapter.

The purpose of the Ocean Plan development process was to identify and map the spatial distribution of the environmental trends, cultural features and current human activities, and place current conditions in the context of long-term trends and projections of future pressures—including those related to climate change. This process also identified in advance the areas suitable for development. While the process received state funding, it was also supported by research grants and private foundations.

The planning process was led by university researchers from the University of Rhode Island's Coastal Resources Centre. The Centre reviewed all existing spatial information about the area to identify knowledge and data gaps and then embarked on projects to fill those gaps. It also drafted the Oceans Plan for approval by the Council. Stakeholders were involved throughout the process, including setting goals and principles for the project. This stakeholder process was crucial to the plan's success, as the relationships that were built hold "perhaps even as much power as the finalised plan itself".⁷³ Stakeholders are permanently imbued into the Ocean Plan with the formation of a Fisheries Advisory Board and Habitat Advisory Board which guide implementation of the plan through consultation.⁷⁴

<i>Goals and Principles for the Ocean Plan Development Process</i>	
Goals	Principles
<ul style="list-style-type: none"> ▪ Streamline the permitting process ▪ Promote and enhance existing uses ▪ Encourage marine-based appropriate economic development ▪ Restore and maintain the ecological integrity and resilience of the biophysical and socio-economic system in the Ocean Plan region. 	<ul style="list-style-type: none"> ▪ Develop the Ocean Plan in a transparent manner ▪ Involve all stakeholders ▪ Honour existing activities ▪ Base all decisions on the best available science ▪ Establish monitoring and evaluation that supports adaptive management.

The Ocean Plan designates "Areas Designated for Protection" and "Areas of Particular Concern". All waters 20m deep and less are Areas Designated for Protection because of research that emerged on their importance to sea duck habitat. Areas of Particular Concern are areas which have:

- unique or fragile physical features or important natural habitats;
- high natural productivity;
- significant historical or cultural value;
- substantial recreational value;
- importance for navigation, transportation, military or other human uses; or
- high fishing activity.

Permits in this area must show that there are no practicable alternatives outside the area that are less damaging and that the proposed project will not result in significant alteration to the area's values and resources.

Recently, the Council extended the spatial planning process to coastal areas with the Shoreline Change Special Area Management Plan. The Shoreline Plan was designed to improve resilience to coastal erosion and sea level rise. Once again, the University of Rhode Island Coastal Resources Centre facilitated the planning.⁷⁵ The Shoreline Plan process gathered baseline coastal information and mapping, including sea level rise predictions.⁷⁶ An innovative aspect of the plan is a suite of tools which were developed to allow homeowners to analyse a project's coastal hazard risk.⁷⁷ Permit applicants must submit a hazard analysis for developments in the coastal zone.⁷⁸ This is intended to be an educative tool to help homeowners and builders understand risk and explore how design changes would reduce it.⁷⁹

The National Oceanic and Atmospheric Administration evaluation for the 2010–2019 period found that “the Rhode Island Coastal Program is a national leader in ocean planning”.⁸⁰ It considers the Ocean Plan has been successfully implemented.⁸¹ It also commends the Shoreline Plan and its associated tools.⁸² The Coastal Resources Center also reviewed the Ocean Plan in 2016.⁸³ It found that a diversity of perspectives and motivations gleaned from the stakeholder engagement led to a stronger planning document that was likely to be actively used long into the future.⁸⁴ The Ocean Plan also successfully streamlined the development of offshore wind farms, contributing to the state's goal of increasing renewable energy production.⁸⁵

Spatial planning enabled cohesion between state and federal jurisdictions. This could be adapted in the Aotearoa New Zealand context as a mechanism to integrate local government and national government actions in the marine area. It could also be valuable if our ocean management system retains diversified departments with different ocean management roles. Having a complete spatial dataset, including temporal stressors, can facilitate better integration through a shared understanding of the marine space.

A key feature which increased the capacity of the Rhode Island government to undertake a large spatial planning exercise was the close relationship and integration with the University of Rhode Island. The Council was able to draw on the expertise, capacity and external grant funding of the University's Coastal Resources Center to develop the Ocean Plan. The University has a high level of public trust which helped facilitate stakeholder engagement. Additionally, commissioning research through the University meant that all the data was publicly accessible and not protected behind private intellectual property laws. There are several marine science departments across New Zealand universities which could be similarly engaged to assist with marine spatial planning endeavours.

Reviews of the Rhode Island spatial planning process also highlighted the importance of stakeholder involvement and engagement through all levels of the planning process and into the implementation phase. Interestingly, the small nature of the state meant that researchers often had personal links with which to engage stakeholders and better communicate about concerns. This benefit could also be leveraged in New Zealand.

The plan document itself is novel in that the scientific evidence behind policy decisions is included. The downside of this is that it is difficult to view the policies and regulations, although they are summarised and set out at the end of the document. The benefit, however, is that this format encourages the development of policies that are based on scientific evidence. Additionally, the science is transparent and accessible to any interested party. This approach could be beneficial for New Zealand to take if it engages in marine spatial planning, even if the research is presented in an appendix style attachment.

California, United States

The California Coastal Commission, established in 1972 and operating under the California Coastal Act 1976, provides an interesting model of a dedicated agency which focuses on complex environmental challenges in a particular spatial area – the coastal zone. This includes land up to several kilometres inland and the coastal marine area out to three nautical miles (which is the extent of the state government jurisdiction). The Commission has 12 voting members, six of whom are locally elected officials and six of whom are appointed by the state government from the public at large. Three ex officio (non-voting) members represent state government agencies, serving to link the work of the Commission with other government initiatives.

The Commission works with local government to assist with their long-range planning and to confirm that their plans conform with the Coastal Act and other state government requirements. Once a local plan (similar to a district plan under the RMA) is approved, local councils are authorised to approve coastal development permits. The Commission retains appeal authority over some significant local council decisions, and directly makes decisions over development applications within the coastal marine area and on public trust land. The Commission is small – with a budget of around US\$20 million a year and just 145 employees. It is able to make decisions that are locally unpopular but are in the broader public interest. It provides a useful model for how an additional oversight layer can be provided over planning and consenting in sensitive areas under high development pressure.

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APPENDIX 5

SUMMARY OF AOTEAROA NEW ZEALAND'S KEY OBLIGATIONS UNDER INTERNATIONAL MARINE LAW

* Years in parentheses indicate when Aotearoa New Zealand became a party to the agreement

Convention	Obligations
United Nations Convention on Biological Diversity 1992 (2005)*	<ul style="list-style-type: none"> ▪ Establish a system of protected areas and areas where special measures are needed to conserve biological diversity ▪ Develop guidelines to select, establish and manage these areas ▪ Regulate and manage biological resources to ensure conservation and sustainable use ▪ Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings ▪ Promote environmentally sound and sustainable development in areas adjacent to protected areas ▪ Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species ▪ Regulate, manage and control the risks associated with the use and release of living modified organisms resulting from biotechnology ▪ Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species ▪ Endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components ▪ Respect indigenous and local community knowledge and promote its application to innovations and practices ▪ Protect threatened species and populations ▪ Where a significant adverse effect on biological diversity has been determined, regulate or manage the relevant processes and categories of activities ▪ Integrate consideration of conservation and sustainable use of biological resources into national decision-making ▪ Avoid or minimise adverse impacts on biological diversity ▪ Protect and encourage customary use of biological resources in accordance with traditional cultural practices to the extent they are compatible with conservation and sustainable requirements
Aichi Biodiversity Targets 2010 (2010)	<ul style="list-style-type: none"> ▪ Effectively integrate biodiversity values in development, planning processes, national accounting and reporting systems ▪ Eliminate incentives and subsidies that harm biodiversity and develop and apply those that incentivise conservation and sustainable use ▪ Governments, business and stakeholders to have plans to achieve sustainable production and consumption and keep impacts of the use of natural resources within safe ecological limits ▪ Halve the rate of loss of habitats or bring it to zero and reduce degradation and fragmentation ▪ Manage and harvest all fish and invertebrate stocks sustainably ▪ Manage agriculture, aquaculture and forestry sustainably, ensuring conservation of biodiversity ▪ Bring pollution to levels that are not detrimental to ecosystem functioning

<p>Aichi Biodiversity Targets 2010 (2010) (continued)</p>	<ul style="list-style-type: none"> ▪ Identify invasive alien species and pathways and control and eradicate priority species ▪ Minimise the anthropogenic pressures on vulnerable ecosystems impacted by climate change and ocean acidification ▪ Conserve and manage 17 percent of terrestrial and inland water and 10 percent of coastal and marine areas ▪ Restore and safeguard ecosystems that provide essential services, including services related to water and contribute to health, livelihood and wellbeing ▪ Restore 15 percent of degraded ecosystems ▪ Adopt a National Biodiversity Strategy and Action Plan ▪ Respect and integrate traditional knowledge and customary use ▪ Fully integrated community engagement at all levels
<p>Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-being 2016 (2016)</p>	<ul style="list-style-type: none"> ▪ Integrate policies, plans and programmes and legal and administrative measures and budgets for the conservation, sustainable use, management and restoration of biological diversity and ecosystems ▪ Incorporate biodiversity values in national accounting and reporting systems ▪ Strengthen institutional support and capacities for biodiversity mainstreaming ▪ Promote conservation, sustainable use, management and restoration of biodiversity as a basis for achieving resilient, sustainable and inclusive cities and human settlements, and climate change adaption and mitigation ▪ Promote sustainable growth as reducing the ecological footprint, combating land degradation and desertification and addressing social inequality ▪ Increase and strengthen ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures ▪ Facilitate the active and effective involvement of all relevant actors and stakeholders ▪ Strengthen indigenous peoples and local communities' capacities to implement the Convention on Biological Diversity by respecting their rights and customary, sustainable use of biodiversity and fair and equitable sharing of benefits arising from their traditional knowledge and practices ▪ Improve the regulatory framework for private sector activities, enhance incentives and promote tools for the conservation and sustainable use of biodiversity ▪ Promote sustainable agriculture ▪ Adopt a holistic integrated view and assessment of ecosystems and the interlinkages between agriculture and biodiversity ▪ Use integrated and cross-sectoral planning processes to reduce inefficiencies and increase productivity whilst avoiding negative impacts on ecosystems and associated biodiversity ▪ Conserve and cultivate native varieties ▪ Prevent agricultural pollution ▪ Control pests and diseases ▪ Promote sustainable consumption and production patterns ▪ Integrate an ecosystem approach into fisheries policies, programmes and plans ▪ Establish actions for the conservation and sustainable use of fishery resources to ensure the long-term viability of the fishing sector ▪ Conserve marine, coastal and inland water ecosystems, recognising their role as carbon sinks ▪ Enhance actions to reduce pollution, including noise and plastic materials ▪ Promote and encourage aquaculture that uses native species ▪ Prevent, control and eradicate invasive alien species

<p>Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-being 2016 (2016) (<i>continued</i>)</p>	<ul style="list-style-type: none"> ▪ Develop strategies to reduce unregulated and unreported fishing and illegal trade ▪ Strengthen the implementation of the <i>Code of Conduct for Responsible Fisheries</i> of the Food and Agriculture Organisation of the United Nations ▪ Promote sustainable forest management as a dynamic and evolving concept for all types of forest ▪ Emphasise the relevance of forests as carbon sinks and their critical role for developing strategies for climate change adaptation and mitigation ▪ Design and promote incentive packages for restoration, conservation and sustainable use ▪ Promote participation in the private sector in the development of production chains to reduce deforestation and degradation ▪ Promote the International Agreement on Forests ▪ Adopt practices for sustainable blue and green infrastructure
<p>Convention on International Trade in Endangered Species of Wild Fauna and Flora 1973 (1989)</p>	<ul style="list-style-type: none"> ▪ Protect approximately 5,800 species of animals and 30,000 species of plants from trade through a system of permits and certificates. ▪ Appendix I species are the most endangered and trade is more restricted for those species
<p>United Nations Convention on the Law of the Sea 1982 (1996)</p>	<ul style="list-style-type: none"> ▪ Exert sovereign rights over the territorial sea, exclusive economic zone and the continental shelf ▪ Protect and preserve the marine environment ▪ Protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species ▪ Determine the total allowable catch and, taking into account the best scientific evidence, ensure that stocks are not endangered by overexploitation ▪ Maintain and restore populations of harvested species at levels which can produce the maximum sustainable yield ▪ Promote optimum utilisation of living resources in the EEZ by determining its capacity to support harvest ▪ Prevent and control marine pollution
<p>Agreement for the Implementation of the provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish 1995 (2001)</p>	<ul style="list-style-type: none"> ▪ Adopt measures to ensure long-term sustainability of straddling fish stocks and highly migratory fish stocks and promote the objective of their optimum utilisation ▪ Ensure that such measures are based on the best scientific evidence available and are designed to maintain or restore stocks at levels capable of producing maximum sustainable yield ▪ Assess the impacts of fishing, other human activities and environmental factors on target stocks ▪ Adopt conservation and management measures for species belonging to the same ecosystem with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened ▪ Minimise pollution, waste, discards, catch by lost or abandoned gear, catch of non-target species (both fish and non-fish species) and impacts on associated or dependent species ▪ Protect biodiversity in the marine environment ▪ Take measures to prevent or eliminate overfishing and excess fishing capacity and to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources ▪ Collect and share complete and accurate data concerning fishing activities

<p>Agreement for the Implementation of the provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish 1995 (2001) <i>(continued)</i></p>	<ul style="list-style-type: none"> ▪ Promote and conduct scientific research and develop appropriate technologies in support of fishery conservation and management ▪ Implement and enforce conservation and management measures through effective monitoring, control and surveillance
<p>Food and Agriculture Organization Code of Conduct for Responsible Fisheries 1995 (1995)</p>	<ul style="list-style-type: none"> ▪ Adopt clear and well-organised fishing policies that have been developed in cooperation with all the groups with an interest in fisheries ▪ Establish new regional fisheries organisations or strengthen existing organisations that aim to cover the cost of conservation, management and research activities for their members ▪ Minimise negative impacts on the environment of fishing and fishing processes in ways that reduce waste and preserve the quality of fish caught ▪ Ensure fishers keep records of their fishing operations ▪ Have enforceable laws with procedures for determining and punishing violators – punishment for violations can include fines or even the removal of fishing licences if violations are severe ▪ When developing fisheries policies consider the costs and benefits of fishing, and the environmental and social impacts of fishing, and use the best scientific information available whilst taking into account traditional fishing practices and knowledge ▪ When information is absent, take the precautionary approach to setting fishing limits ▪ Encourage people and organisations to share their views on fishing issues, and particular attention should be given to the needs of local people ▪ Prohibit dynamiting, poisoning and other destructive fishing practices ▪ Avoid overfishing and ensure the size of the fishing fleet is not too large for the natural supply of fish ▪ Understand the effects of fishing gear on the environment (impacts on coral reefs, for example) before using a new method ▪ Ensure fishing methods and gear are selective and designed to minimise waste and promote high survival rates for escaping fish ▪ Ensure gear minimises the catching of fish species that are not wanted (non-target or bycatch fish) or that are endangered ▪ Phase out fishing gear and fishing methods that are not selective or which cause high levels of waste ▪ Protect important fish habitats such as wetlands, mangroves, reefs and lagoons from destruction and pollution ▪ Where natural disasters harm fisheries resources take emergency conservation and management measures when necessary ▪ Conserve genetic diversity and minimise negative effects of farmed fish on wild fish populations while increasing supplies of fish for human consumption ▪ Avoid disputes and conflict between different users of resources ▪ Ensure that the livelihoods of local communities are not negatively affected by aquaculture developments ▪ Establish procedures for monitoring and assessing the environmental effects of aquaculture ▪ Monitor the types of feed and fertiliser used in farming fish

<p>Food and Agriculture Organization Code of Conduct for Responsible Fisheries 1995 (1995) (<i>continued</i>)</p>	<ul style="list-style-type: none"> ▪ Take into account local communities and their ways of living and opinions in the coastal planning process ▪ Carry out fisheries practices in a way that avoids conflict among fishers and other users ▪ Support fisheries research efforts, monitor the conditions of fish and their habitat and gather data on the effects of different types of fishing gear on target populations and the environment generally
<p>United Nations Framework Convention on Climate Change 1992 (1993)</p>	<ul style="list-style-type: none"> ▪ Adopt national policies to mitigate climate change through limiting anthropogenic (human-induced) emissions of greenhouse gases and protecting and enhancing our greenhouse gas sinks and reservoirs ▪ Report detailed information on greenhouse gas inventories, national actions and projected human-induced greenhouse gas emissions and removal by sinks, according to timeframes set out in the Convention ▪ Take into account climate change considerations in relevant social, economic and environmental policies and actions ▪ Promote, and cooperate in, relevant scientific and technological research and exchange information (including transferring technology to developing countries) ▪ Provide additional financial resources to meet the agreed full costs incurred by developing countries in complying with their obligations under the Convention ▪ Promote public awareness of, and education about, climate change issues
<p>Kyoto Protocol to the United Nations Framework Convention on Climate Change 1997 (2005)</p>	<ul style="list-style-type: none"> ▪ Reduce greenhouse gas emissions to their 1990 levels ▪ Submit an annual inventory of greenhouse gas emissions to the Convention ▪ Formulate, implement and publish regular updates to national and regional programmes that contain measures to mitigate climate change and facilitate adequate adaptation to climate change ▪ Cooperate internationally in relation to policies and measures (including scientific and technical research and development) and facilitating public awareness and access to information on climate change
<p>Paris Agreement 2015 (2016)</p>	<ul style="list-style-type: none"> ▪ Prepare, communicate and maintain successive nationally determined contributions and pursue domestic measures to achieve them ▪ Communicate nationally determined contributions every five years and ensure each successive nationally determined contribution represents a progression beyond the previous one ▪ Regularly report on emissions and how they are tracking to meet the target ▪ Engage in adaptation planning which involves submitting and periodically updating a communication of priorities, implementation and support needs, plans and actions ▪ Provide financial support to assist developing countries' mitigation and adaptation efforts
<p>International Convention for the Prevention of Pollution from Ships 1973 (MARPOL) (1998)</p>	<ul style="list-style-type: none"> ▪ Prevent pollution of the marine environment from oil and oily matter, harmful substances carried in packaged form, sewage and garbage from ships ▪ Prevent air pollution from ships
<p>Convention of the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1971 (1975)</p>	<ul style="list-style-type: none"> ▪ Prohibit the dumping of any wastes except: dredged material; sewage sludge; fish waste or material resulting from industrial fish processing operations; vessels and platforms or other man-made structures at sea; inert, inorganic geological material; organic material of natural origin; bulky items primarily comprising iron, steel, concrete and similar unharmed materials; and carbon dioxide streams from carbon dioxide capture processes.

Although becoming party to MARPOL (see above) in 1998, New Zealand has only signed up to four of MARPOL's six Annexes; the Annexes on sewage (Annex IV) and air pollution (Annex VI) from ships remain unsigned. However, Annex VI is expected to be incorporated into an amendment to the Maritime Transport Act in 2022.

In our final report, EDS will continue to explore Aotearoa New Zealand's international legal obligations, including the more nuanced implications of binding and non-binding agreements and the implications for integrated management of different international legal jurisdictions across marine zones. Regional agreements will also be important, including with respect to marine pollution and regional fisheries management. We will also look more closely at the application of international approaches to the various marine jurisdictions. Aotearoa New Zealand is active on the world stage, therefore the implications of ongoing negotiations and evolving international expectations in marine management will continue to be important considerations alongside the application of existing international legal instruments.

APPENDIX 6

LIST OF KEY QUESTIONS

Chapter 3: The existing oceans management system

- What other statutory frameworks are important for how our oceans are managed?
- What other elements of reform and social/political context will be important as part of the background against which oceans reform takes place?

Chapter 4: Norms

- Is it possible to have a purely objective assessment of problems? Which of the problems identified in Chapters 2 and 3 are there likely to be consensus about?
- Is it morally right for our objectives for a future system to be driven by the desire to create ecosystem services that benefit people? Are there situations in which that would be right, and others in which it would be wrong (for example, in the retention or removal of mangroves)?
- What would an equitable distribution of resource use rights look like in a future system?
- Would an answer be different if we considered what fairness to *nature* would look like?
- Is it appropriate for “planning”, rather than the market, to play a greater role in determining what the future uses of our marine space should be than on land?

We note also that there are a number of other questions posed in Chapter 4 that should be read within the context of the chapter’s discussion on various principles.

Chapter 5: Reconsidering the toolkit

- What implications does a new purpose for the proposed NBA (“te oranga o te taiao”), and a more focused purpose for the setting of environmental limits (including ecological integrity) have for the marine environment?
- Should environmental limits and targets under the NBA be used as a mechanism to progress spatial protections (eg marine protected areas) and targets for marine species to complement conservation legislation?
- What additional national direction could be promulgated under the RMA to improve marine outcomes?
- Should national direction under the NBA be expanded to address the environmental impacts of fishing?
- Under what circumstances should powers under the RMA/NBA be transferred to Māori?
- Should the use of tendering or other competitive processes for allocating rights in the marine area be

mandatory, or more direction provided as to when they should be used?

- Should there be attempts to revive the concept of aquaculture management areas in a more nuanced manner (eg to implement broader marine spatial planning processes)?
- Should occupation rights for aquaculture relate, not to a particular space, but rather to a biomass that can be shifted to different areas?
- Should there be a compulsory charge for coastal occupation under the RMA/NBA, or clearer direction as to when/what such charges should be imposed for different uses?
- Should the RMA/NBA contain new, more directive types of tools where an environmental limit is threatened, like an “emergency” marine conservation order? Should such things be temporary?
- Could iwi be empowered to use such tools in a way that reflects traditional uses of rāhui?
- Should an EEZ policy statement be developed? What should it contain? Should it be made mandatory (like the NZCPS under the RMA)?
- Should the te Tiriti clause in the EEZ Act be amended to be more consistent with the Conservation Act and proposed NBA?
- Should there be a mandatory, comprehensive set of firm environmental limits required under the Fisheries Act as under the NBA, rather than just a toolbox of measures to be deployed in a selective or discretionary manner? If so, what should be included in them?
- Should there be a national fisheries environment strategy, outlining a strategic plan for how sustainability measures would be rolled out to meet environmental limits?
- Should fisheries plans and permits operate in a manner more similar to the RMA/NBA, where a “consent to fish” and conditions are linked to the environmental policies and objectives of a plan?
- Should there be a requirement for fisheries plans to be place-based, to complement mandatory regional coastal plans under the RMA?
- Should the Harvest Strategy Standard or something like it be formalised as part of the decision-making system?
- How could a future system strengthen an ecosystems-based approach to stock assessments and catch limits? Would changing approaches to research funding make a difference?

- Should the QMS be unwound entirely and replaced with a non-market-based system (eg permitting)?
- Should there be some buy back of quota, and the establishment of a public quota holder to lease out rights based on a broader range of social and environmental factors?
- Should Fisheries Act tools like the TAC be “hijacked” by other frameworks with quite different purposes, such as for marine protected areas (zero take) or areas in which pressures on habitats for broader biodiversity reasons need be reduced (eg under the RMA/NBA)?
- Could more effective cross-referencing between existing frameworks ensure that their tools are deployed in a more coordinated and strategic manner?
- Could an expanded NZCPS perform a more integrative role, by being deemed to be an EEZ policy statement and/or a fisheries strategy?
- Should the purpose and principles of existing legislation be amended to provide for cross-cutting (and identically defined) principles like “ecosystems-based management”, “mana”, or “oranga”?
- Should marine spatial plans be strategic only, or should they be able to have direct regulatory effect? If the latter, should they be an alternative to other frameworks like the RMA or marine protected area legislation, or a replacement for them?
- If we were to adopt spatial planning, should marine spatial plans be rolled out across the country, or created as the need arises?
- Should marine spatial planning and spatial planning on land be done separately, or through the same (or connected) processes?
- Should an overarching Oceans Policy be developed in Aotearoa New Zealand to set high level goals and outline a vision for the future?
- Should an Oceans Policy be a manifesto for reform (with an end point) or a living instrument with ongoing application to how decisions are made under other frameworks?
- Is an Oceans Policy worth doing if it lacks direct effect or influence on other regulatory or funding frameworks having their own more targeted purposes and processes?
- Should marine spatial plans and an oceans policy be statutory tools? If so, would this require a separate statute to be created to overlay existing ones, or could an existing framework be used?
- To what extent should the legal framing for marine spatial planning be prescriptive, or flexible?
- Should the RMA and the EEZ Act be combined into one single, enlarged act (an expanded NBA)?
- Should the Marine Mammals Protection Act be folded into the broader framing of an updated Wildlife Act?
- Should a combined RMA/EEZ Act also subsume proposed legislation for marine protected areas (or an updated version of the Marine Reserves Act)?
- Should the boundary between the RMA and the EEZ Act be shifted, so that the former focused more on the coastal environment (eg out to three nautical miles or some other boundary) and the latter focused on the oceanic environment less impacted by land-based activities?
- Should we create an integrated piece of conservation legislation across land and sea, subsuming marine focused legislation like the Marine Reserves Act and Marine Mammals Protection Act?
- Should more of the environmental components of the Maritime Transport Act be shifted to the EEZ Act?
- Should area-specific conservation legislation be integrated into broader frameworks (eg marine protected area legislation) if those broader frameworks were made more fit for purpose and allowed for regional arrangements?
- Should we continue to create bespoke statutes for individual marine protected areas?
- Should responsibility for the impacts of fishing on biodiversity and the environment (other than fish stocks themselves) be more firmly shifted away from the Fisheries Act and into the RMA/NBA?
- Should the sustainability measures contained in the Fisheries Act be transferred into the RMA/NBA?
- Do the potential advantages of shifting catch limits and other stock management tools from the Fisheries Act to the RMA/NBA outweigh the potential disadvantages?
- Should the Strategic Planning Act be expanded to apply to the EEZ and what should its relationship with the EEZ Act (and instruments under it) be?
- Should the Strategic Planning Act be expanded to include fisheries considerations? If so, should a spatial plan influence decisions under the Fisheries Act, or should decisions under the Fisheries Act shape the spatial plan?
- Should a more integrated Oceans Act be created? If that were to happen, what existing statutes (or parts of them) should be subsumed?
- Would the potential benefits of integrating marine matters be outweighed by the downsides of fragmenting other systems (eg the catchment-sea interface, the movement of species across domains, biosecurity, the transport system)?

Chapter 6: Legislative design

- Should we combine the Crown Minerals Act with the Continental Shelf Act?

Chapter 7: Institutional design and international approaches to oceans governance

- Should central government take a stronger role in the development of national direction under the RMA for the coastal marine area, by (for example) creating regulations that give effect to the NZCPS?
- Should the environmental impacts of fishing activity – or fishing management itself – be shared between central government (Fisheries NZ) and regional councils? What implications does that have for the resourcing and capabilities of councils in future?
- Should there be a transfer of decision-making power to mana whenua with respect to fisheries, coastal occupation and customary use, and on what basis/for what things?
- Should there be higher level co-governance put in place with respect to decisions (Māori and Crown), or should partnership occur at a regional level (iwi/hapū and council)?
- Should the functions of regional councils beyond a certain line (eg mean high water springs or three nautical miles from land) be transferred to a central agency (perhaps with regional branches) such as the EPA or a new Oceans Agency?
- What is the proper role of a centralised body like the EPA when it comes to marine management? Should it have a clearer mandate?
- Should three water services (including wastewater and stormwater, with significant impacts on the marine environment) continue to be managed by territorial authorities and council-controlled organisations, or should there be greater centralisation?
- How much central involvement should there be in the development of marine spatial plans? Are they to be driven by communities, or national level concerns, and in what measure?
- To what extent should fisheries management be devolved to quota holders and operators (eg through industry-led fisheries plans), and does there need to be more clarity around when that is acceptable?
- Should we establish an independent Oceans Commission to act as a watchdog and hold government to account, or as an expert appeal body for some marine management decisions?
- If we were to establish a Tikanga Commission at a national level, should this be an independent expert entity focused on mātauranga at a general level, or one that is representative of iwi and hapū and reflective of different versions of tikanga across different rohe moana?
- Should there be an independent or arm's length Oceans Agency (potentially an expanded and strengthened EPA) to take on some regulatory decision-making (eg consents, sustainability measures) instead of accountable institutions like councils and ministers?
- Should the Environment Court have a role in reviewing decisions made under the Fisheries Act?
- Should central government be arranged as it is now (with marine matters fragmented across different departments and agencies), or should there be greater integration with the marine area as the focus (eg an Oceans Ministry)? Is an Oceans Secretariat and Minister for Oceans and Fisheries going to be enough to align the activities of those institutions?
- Should our institutions (eg regional councils and the Department of Conservation) continue to span land and sea, or should a regulator be more focused on oceans? What implications does that have for where a jurisdictional boundary is drawn, or are more complex overlapping jurisdictions required?
- If we were to have an integrated Oceans Ministry, what should its mandate be?
- Should there be formal statutory establishment of key institutions (eg if we were to have an Oceans Ministry)?
- What should the mandate of the EPA be in the marine space?
- Should decision-making power lie with more independent or arm's length institutions like an Oceans Agency or EPA (or Environment Court), or lie with institutions that are accountable to voters (Ministers and councils)?
- Do sufficient independent checks and balances exist to hold accountable institutions to account?
- Should there be an independent Oceans Commission and Tikanga Commission, or an expanded role for the Parliamentary Commissioner for the Environment, to ensure that ministers and councils are performing their roles as intended? What should the extent of their power be (eg the ability to enforce duties in the courts)?